

# HOME CINEMA

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## Choice

### REVIEWS

DALI Opticon  
5.1 speaker pack  
Canton soundbase  
Hitachi 49in LED  
Samsung 4K  
Blu-ray player  
JL Audio 8in sub  
Devolo Powerline

# ULTRA HD HEROES

Sony XD93, Samsung KS9000  
and Panasonic DX750 TVs  
– which is best for you?



### 4K FACE OFF!

Our verdict on  
the first wave of  
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**WIN!**  
Q Acoustics'  
stylish Q-BT3  
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### FILM & TV

- STAR WARS: THE FORCE AWAKENS
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## Philips resurgent

TV innovator joins OLED fight

## Flatscreen tune up

Get a better image in 20 minutes

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→ READER'S ROOM → ASPECT RATIOS EXPLAINED → WIRELESS HEADPHONES

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MusicCast Controller App



For more info visit [yamaha.com/musiccast](http://yamaha.com/musiccast)

# HOME CINEMA Choice

www.homecinemachoice.com

## EDITORIAL TEAM

**Editor** Mark Craven  
mark.craven@homecinemachoice.com  
**Deputy Editor** Anton van Beek  
anton.vanbeek@homecinemachoice.com  
**Art Editor** John Rook

## CONTRIBUTORS

Steve May, John Archer, Tekura Maeva, Ed Selley, Jon Thompson, Martin Pipe, Danny Phillips, Richard Stevenson, Adam Rayner  
**Photography** Mike Prior, Claire Collins

## ADVERTISING

**Advertising Sales Executive** Sonia Smart  
Tel: 07710 394391  
E-mail: sonia.smart@hifinews.com

**Advertising Sales Executive** Simon Dunn  
Tel: 01689 869853  
E-mail: simon.dunn@hifichoice.co.uk

## MARKETING AND SUBSCRIPTIONS

**UK:** New, Renewals and Enquiries  
Tel: 0844 243 9023  
E-mail: help@hcc.secureorder.co.uk  
**USA & CANADA:** New, Renewals and Enquiries  
(001) 866 647 9191  
**REST OF WORLD:** New, Renewals and Enquiries  
Tel: +44 (0)1604 828 748

## BACK ISSUES

Contact: www.myhobbystore.co.uk/contact  
www.myhobbystore.co.uk/hcc

## MANAGEMENT TEAM

**Group Editor** Paul Miller, paul.miller@avtechmedia.co.uk  
**Group Sales Manager** Rhona Bolger  
**Head of Design and Production** Julie Miller  
**Subscriptions Manager** Kate Hall  
**Chief Executive** Owen Davies  
**Chairman** Peter Harkness

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Enterprise House, Enterprise Way  
Edenbridge, Kent, TN8 6HF  
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If you don't want to miss an issue



We check out a home cinema garage conversion, p34

# Welcome

There's much to be excited about this Summer – plenty of sport and the hope that it may actually stop raining. And even if the coming months are a washout, home cinema owners can always cosy up indoors with a pile of Ultra HD Blu-rays. A pile? Certainly – the new format is showing real early vigour, with studios constantly confirming new titles. Our roundup (see p21) looks at the first wave of releases, but there will be many others available to early adopters, particularly if you're prepared to import the discs (which are thankfully region-free) from the US.



Most excitingly, **Hollywood is already unlocking its vault to give back-catalogue titles 4K treatment.**

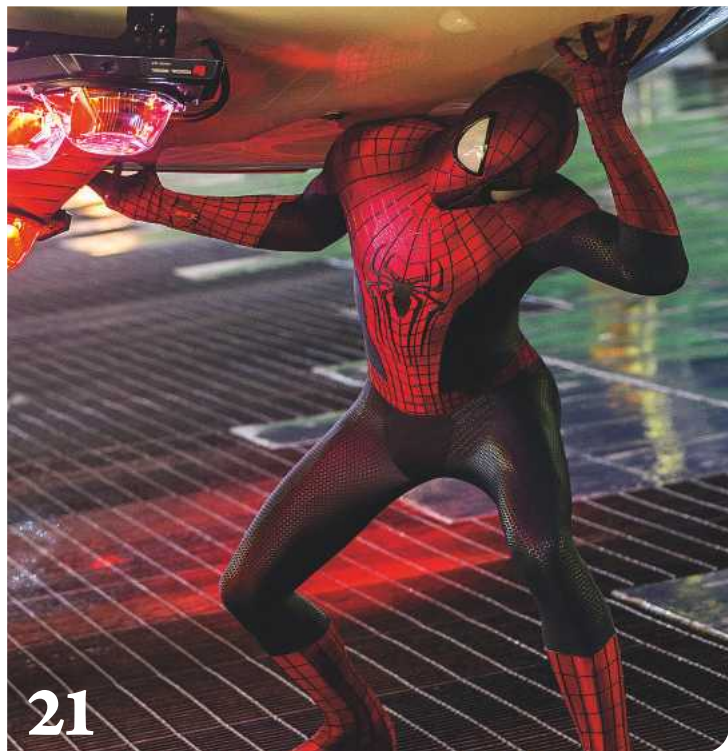
The likes of *Independence Day*, *Labyrinth* and even *The Texas Chain Saw Massacre* are all coming to a next-gen disc near you this Summer. It's early days, of course, but UHD Blu-ray is getting off to a good start. Keep 'em coming!

*Mark Craven*  
Editor





# MENU



## CONTRIBUTORS



**John Archer:**  
The UK's most experienced TV tester cut his teeth as an early HCC staffer



**Jon Thompson:**  
Film producer and post-production expert delves deep into Hollywood and AV



**Steve May:**  
HCC's former Editor-in-Chief is one of the UK's most respected AV journo



**Martin Pipe:**  
Technical expert Martin is renowned throughout the home cinema industry



**Adam Rayner:**  
The UK's foremost expert in extreme audio writes about bass, hi-fi and, er, cartoons



**Adrian Justins:**  
Made his name as the editor of *What Video & TV* and *What Home Cinema*

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108 **COLLECTING...** Sylvester Stallone.  
Has *Creed* left you hungry for more Sly?  
Add these to your DVD/BD collection

LG OLED TV 4K



NOT JUST A NEW TV.  
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OF TELEVISION.



## PERFECT BLACK CREATES PERFECT COLOUR

OLED's next generation pixel construction allows for unique screen architecture which is so light and thin it can be bonded to a transparent piece of glass. This stunning television produces an incredible picture with infinite contrast that is complimented by an innovative sound bar stand that produces superb audio. A masterful television from LG's award winning OLED TV range.

[lg.com/uk/discovered](http://lg.com/uk/discovered)



LG EG960V  
JUNE 2015



LG EG960V  
MAY 2015



LG EG960V  
JUNE 2015



LG EC970V



# BULLETIN

→ **News Highlights** **SONY** Projector brand refreshes its Full HD lineup  
**MARTINLOGAN** High-end electrostatic Neolith speakers land in the UK **HDR** Televisions to eclipse cinema quality? **AT THE PLEX** This month's biggest movie releases **NEWS X10** The hottest news stories in bite-sized chunks **DEADPOOL** Superheroics hit Ultra HD Blu-ray & **MORE!**

## Select and serve

Onkyo TX-RZ810 → [www.onkyo.co.uk](http://www.onkyo.co.uk)



Onkyo's new £1,050 TX-RZ810 sees the brand embracing multiroom audio – this 7.2-channel AV receiver will support the new FireConnect standard once firmware lands in the Summer, allowing it to connect to FireConnect wireless speakers. Also in the amp's armoury is THX Select2 Plus-certification, 4K/HDR support, Dolby Atmos and DTS:X decoding (the latter, again, after a firmware update) and a custom amp circuit design that promises 'speed, dynamism, and accuracy.'

### HCC ONLINE...

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# Budget bigscreen

Sony VPL-HW45ES → [www.sony.co.uk](http://www.sony.co.uk)



Sony is refreshing its SXRD Full HD projector range with a new entry-level model. Replacing last year's VPL-HW40ES in the pecking order, the VPL-HW45ES increases the brightness rating to 1,800 Lumens but retains the compact chassis and black and white finish options. Reality

Creation and Motionflow technologies are on hand to fettle 1080p and 3D sources, while horizontal/vertical lens shift and a 1.6x zoom aid setup flexibility. Pricing is expected to be around £2,000.



## Yamaha extends multiroom



Yamaha is bolstering its MusicCast multiroom family with the addition of the £400

WXA-50 amplifier and £300 WXC-50 pre-amplifier. Billed as products that 'almost everyone has been asking for,' the former allows for non-MusicCast speakers to be integrated within a setup, while the latter caters for a variety of AV gear via its digital and analogue audio outputs. Both will go on sale in August, and feature compressed music enhancer tech among their spec hits. [www.uk.yamaha.com](http://www.uk.yamaha.com)

## Torus plays with power



The latest addition to Torus Power's TOT lineup of toroidal isolation transformers is now available on these shores courtesy of UK distributor Karma-AV. Costing around £2,000 and available in shelf and rack configurations, the TOT AVR (which stands for Automatic Voltage Regulation) uses Piltron-designed components to isolate three power outlets from the external power grid to limit electrical noise, and counters the system-bothering effects of voltage 'sags' and power surges. [www.karma-av.co.uk](http://www.karma-av.co.uk)

# LG unveils visionary TV

Wafer-thin 4K screens stake a claim to the high end of home cinema

LG has previewed its latest 4K HDR-enabled OLED screens, and confirmed that every one will be Dolby Vision HDR (High Dynamic Range) compatible. The company believes the combination of Dolby's dynamic HDR control and improvements to OLED image quality will set the range apart from rival panels. Having got up close and personal with the screen, we think LG might have a point.

All the incoming Dolby Vision LG TVs are fully compatible with HDR 10, the open standard used by Blu-ray and content services. However, Dolby Vision sources offer more precise range control that is able to optimise the display from scene to scene.

Heading up LG's 2016 OLED lineup is the Signature G6. The set introduces a dramatic 'Picture on Glass' design, just 2.57mm thick at its apex. All inputs, along with the main PCB and components, are located within the stand, which can be folded back behind the TV and used as a wall mount with standard VESA bolts. The TV comes with a Harman/Kardon designed 60W soundbar. The 65in G6 will

sell for £6,000, while a step-up 77in version is priced at a numbing £25,000.

The G6 is the first OLED TV to win Ultra HD Premium certification, and according to LG has a peak luminance of 800 nits. We took a gander at the TV running Amazon Video's *Mozart in the Jungle* in HDR 4K and it looked spectacular. The set was also demonstrated with sequences from *Pan* and *Jupiter Ascending*.

'This isn't just our most advanced TV ever,' LG's home entertainment product manager Robert Taylor told *HCC*. 'It's a whole new category. It's a completely different device. It captures the imagination like nothing else...'

## The supporting cast

LG will back up the Signature G6 with the E6. While this offers similar cosmetics, it's a tad less bright and uses a simpler Harman/Kardon 40W soundbar. It'll be available in 55in and 65in screen sizes, at £3,500 and £5,000 respectively.

Interestingly, there will be only one curved OLED in the range this year, the C6. This 5mm-thin screen is priced at £3,500 (55in) and £4,500 (65in). If you don't need 3D and want to keep things flat, there's the B6 series in matching sizes and prices.

All models utilise the latest webOS smart platform, v3.0, and from this Summer will be firmware-upgraded to offer Freeview Play. Other changes to the webOS smart platform include making the launcher bar now one long strip, so no more right clicking is required, while a new feature called My Content allows viewers to bookmark movies on VOD services to watch later.

## Playlist...

Team *HCC* spins up its disc picks of the month

### Bad Boys II (All-region BD)

It may be about a decade overdue, but this BD's superb 'Mastered in 4K' encode and punishing DTS-HD MA 5.1 mix ensure that it was worth the wait.



### 11.22.63 (Fox Channel)



James Franco stars in this superb Stephen King miniseries about a man who travels back in time to prevent the assassination of JFK.

### The Ninth Configuration (Region B BD)



A feature-packed hi-def debut for *The Exorcist* author William Peter Blatty's darkly comic rumination on faith and sanity.

### Krampus (All-region BD)



An early Xmas gift for fans of the oft-ignored horror comedy genre, with solid AV credentials.

### Three Days of the Condor (Region B BD)



Sydney Pollack's post-Watergate thriller is a welcome addition to the Masters of Cinema lineup.



All LG's 2016 OLED TVs will support Dolby HDR

**At the 'plex...**

Heading out to see a flick?  
Catch these this month

**X-Men: Apocalypse**

May 18: An ancient mutant of immeasurable power plans to wipe out humanity in director Bryan Singer's explosive sequel to 2014's time-travel-tastic *X-Men: Days of Future Past*.

**Alice Through the Looking Glass**

May 27: Mia Wasikowska's Alice must return to the whimsical world of Underland to save The Mad Hatter (Johnny Depp) in this garish-looking sequel to Tim Burton's 2010 blockbuster.

**Warcraft: The Beginning**

June 3: Films based on videogames have a terrible reputation. But with Duncan (Moon) Jones behind the camera, we're keeping our fingers crossed for something special from this bigscreen adaptation of the insanely popular online role-playing game.

# HDR shakes up industry

TV pro Dado Valentic predicts new tech will eclipse cinema quality

Award-winning TV and movie colourist Dado Valentic believes that the days of home cinema playing second fiddle to the silver screen could be coming to an end. Speaking at London's legendary De Lane Lea post-production studios, Valentic (whose work includes pioneering HDR TV show *Marco Polo* for Netflix), told HCC there's a seismic shift happening as HDR rewrites the rulebook.

'For the first time in history, people are going to be able to view at home better-looking images than they can in the cinema,' he declared. 'I tell you what... I'd rather watch *Batman v Superman* in 4K HDR at home with my own popcorn, than to go to see it at the Odeon Leicester Square. The image there isn't going to look as clear or as beautiful as it does on this screen...' Valentic then pointed to a Panasonic DX902 Ultra HD premium set, positioned alongside a Sony OLED HDR reference monitor for comparison.

The push behind HDR has other implications for content creators and broadcasters alike. 'Look at this from an industry perspective. The people who are controlling streaming, delivering these shows, are going to have all the power. They don't just have the power of convenience; they also have the power to deliver better images than you can see at the cinema. So what you will see from Netflix and Amazon is not going to be just any TV productions, they're going to have much better production values.'

**All shook up**

HDR is also shaking up the post-production industry, believes Valentic. 'There are companies that do television, and companies that do film. They are like two separate worlds. But



**Dado Valentic:** 'For the first time in history, people are going to be able to view at home better images than they can in the cinema'

now the guys that do TV 'post' are going to have to do all the tricks that those in film 'post' are doing, in order to be able to deliver images

as good. Most of the TV post houses are not ready for these shows, because the way of working is completely different.'

Valentic revealed that when Netflix asked for HDR on *Marco Polo*, he had to invent a bespoke solution that allowed him to grade SDR and HDR versions at the same time, because no tools existed. 'It was the only way we were able to complete this job in time,' he admitted. 'I developed a colour space scaling tool that allows me to switch between HDR and SDR.'

And it's increasingly important for filmmakers to produce masters that can be repurposed for HDR later. 'We had the BBC come to us with a documentary to turn into HDR. But they only had a REC.709 master. We turned them down. All you can do is stretch the existing dynamic range to something that doesn't really exist. My prediction is we're not just seeing a shift in technology, HDR is going to drive the industry in a very specific way.'



Dado Valentic showcased HDR on a Panasonic DX902 TV

## All about that base...

Cabasse brings streaming and hi-res audio support to its new soundbase

French audio manufacturer Cabasse is taking on the competitive soundbase market with its new Stream Base speaker. The latest addition to the Cabasse Stream range, the £450 soundbase claims to be unique in offering built-in streaming from online services and network drives.

The unit utilises active filtering technology to individually control the dome tweeter, midrange and the low-midrange drivers of its stereo channels, supported by a 5in downward-firing woofer for low frequencies.

When connected to a home network, the Stream BASE can playback music stored on

connected devices (with support for WAV, AIFF, ALAC, FLAC and MP3 files) and gives access to internet radio stations and online streaming services such as Spotify and Tidal. High-res audio up to 24-bit/96kHz is supported.

Connections are coaxial and optical digital audio inputs, a 3.5mm stereo mini-jack and a USB port for file playback. There's also aptX Bluetooth for smart device hookup.

Cabasse's Stream Base features a down-firing 5in woofer in addition to its three-way stereo speakers







The Creative Life



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U65S7906 - U55S7906 - U50S7906



## Extras...

Small items that could make a big impression...

### Reebok Alien Stompers



Hot on the heels of Nike's *Back to the Future* self-lacing trainers, Reebok has produced a limited run of replica high-top 'Alien Stomper' sneakers as worn by Ellen Ripley (Sigourney Weaver) in the classic 1986 sci-fi horror sequel *Aliens*. If retro-futuristic footwear is your thing, you can pick up a pair for around £130.

### Gentle Giant Star Wars Villain Set 3-Pack



As fans of the classic 1970s Kenner *Star Wars* figures, we're loving the jumbo 12in replicas Gentle Giant is

putting out based on digital scans of the original 3.25in toys. Priced around £240, this villainous new triple-pack features super-sized versions of the classic Darth Vader, Stormtrooper and Death Squad Commander figures housed in a vintage-style window box.

### The Star Trek Book



DK's seriously comprehensive guide to all-things *Star Trek* is a great read for hardcore Trekkers

and casual fans alike. Priced at just £16.99, this handsome hardback is packed with info about the science, species and spacecraft that make up the history of the *Star Trek* universe. It also provides a helpful guide to the key characters and factions that have appeared in the various TV shows, from James T. Kirk and Spock to Quark and the Orion crime syndicate.

# Movie rooms get on trend

Concept of traditional home cinema is being challenged, say pros

If you want your home theatre to be at the cutting-edge when it comes to design you need to ditch the cinema-style chairs, hide the speakers and chuck out the popcorn maker. That's according to a shift in trends within the professional industry reported by trade body CEDIA UK after it quizzed its members.

'For home cinemas, it's out with the *Batman* theme and popcorn machine and in with mohair, velvet sofas and cashmere throws,' suggests Dean Keyworth of Armstrong Keyworth Interior Design. 'Even acoustic walls can be disguised in designer fabric so that it feels more like a luxurious den with great AV, rather than a tiny Odeon.'

And it's not just within issues of style that the custom install trade is noting a change. An upsurge in media rooms is occurring as lifestyles alter and families are keener than ever to integrate technology into their homes.

Explains Rob Sullivan from install outfit Electric String: 'Today's media room is yesterday's dining room. More and more families are ditching the traditional congregation around the dinner table for a more relaxed, fun environment.'

'Space in any family home is always an issue,' concurs interiors expert Tim Gosling. 'It seems you are always "one room short", no matter how big your house. This is why rooms need to be multi-functional – the den, play room, family room and cinema are combined more and more often.'

For pro cinema specialists, this means new approaches to their work, focusing on 'stealth' hardware and attention to aesthetics. Giles Sutton of London-based company James & Giles says the idea of elegant, sophisticated multi-use rooms, incorporating hidden technology, 'is challenging the original concept of what a home cinema actually is.' Speakers, projectors and even TV screens are increasingly being hidden from view when not in use.



**Melanie Malcolm:** 'It used to be that a 55in screen was the standard size. Now we're seeing these transferring to the bedroom'

Not that he's complaining: 'Multi-use spaces are particularly exciting to work with.'

CEDIA is the international trade body for the home technology industry, and now has over 4,000 members worldwide. Each Summer its UK division announces its CEDIA Awards, highlighting some of the most desirable home cinemas in the country, and seating is another area of flux that was picked out by its UK members. Design specialist Geraldine Morley sees parallels with the commercial cinema industry: 'In the same way that arthouse cinemas and increasingly mainstream cinema groups sell sofa seating at a premium, people want to stretch out and lounge on very comfortable seating when enjoying a film.'

And when it comes to rooms using flatscreen TVs rather than projectors, screen sizes are getting bigger. 'It used to be that a 55in screen was the standard size,' says Melanie Malcolm of Leeds' Bespoke Home Cinemas. 'Now, we're seeing these screens transferring to the bedroom while 65in or even 75in screens are becoming widely deployed in modern media rooms.'

'These screens are much more beautiful than they used to be, attractively designed and detailed from every angle, even including the minimalist – rather than purely functional – stands.'



Modern media rooms major on style and flexibility

IMAGES COURTESY OF ELECTRIC STRING AND TIM GOSLING



## This month's top 10 news stories in handy, bite-sized chunks...



### 1 Yamaha rolls out DTS:X update

Yamaha has unleashed a software update that brings long-awaited DTS:X support to its RX-A1050, RX-A2050 and RX-A3050 Aventure AV receivers and its standalone high-end CX-A5100 processor. The upgrade can be run via the hardware's built-in updater if a 'net connection is present, or you can download the update from the Yamaha website and install it from USB. The company also claims that a DTS:X update will be 'rolling out soon' for its YSP-5600 soundbar.

### 2 4K TV sales

The latest worldwide TV market report released by research firm Futuresource Consulting claims that shipments of 4K/Ultra HD screens grew by almost 160 per cent during 2015 to a total of 32 million units (the equivalent of 14 per cent of all TVs sold). However, total TV shipments fell by two per cent during the year.

### 3 Bourne reborn on UHD BD

Universal Studios is the latest Hollywood major to commit to the Ultra HD Blu-ray format. It will start shifting titles in the US this Summer, with upcoming blockbusters *Jason Bourne*, *Warcraft: The Beginning* and *The Huntsman: Winter's War* set to appear on 4K disc in 2016, alongside the likes of *Lucy*, *Everest* and *Lone Survivor* from its recent back-catalogue.

### 4 Samsung signs up for AC-4

Dolby Laboratories has announced that Samsung TVs will support its new AC-4 audio codec from 2017. The new platform boasts greater space efficiency for broadcasters thanks to its advanced compression tech and supports the delivery of object-based sonics. The likes of TP Vision and Sony are also on board.

### 5 Whoops...

Last issue we featured a review of Revolution Acoustics' innovative SSP6 Multiducers, yet failed to credit the UK distributor correctly. The wall-hugging speakers are distributed in the UK by RGB Communications.

### 6 Puttnam hates windows

Film Distributors' Association president Lord Puttnam has taken the industry to task over its insistence on maintaining strict theatrical-to-home-entertainment windows in his annual keynote speech. 'The enforced rigidity of 17-week windows of theatrical exclusivity, preventing legitimate consumer access at a time when cinemas only tend to play films for less than half of that period, is utterly counter-productive and unjustified,' sniffed the former film producer.

### 7 Sky inks deal for 4K films

Sky has signed a pan-European deal with Sony Pictures that grants it the rights to the studio's forthcoming blockbusters a year ahead of rival video-on-demand platforms. The deal comprises all new and future Sony films, including any 4K/UHD productions.

### 8 RIP Xbox 360

Microsoft has said that it is ceasing production of its Xbox 360 console. 'While we've had an amazing run, the realities of manufacturing a product over a decade old are starting to creep up on us,' said Xbox chief Phil Spencer. The company will continue to sell its existing inventory of the console.

### 9 Netflix to go offline?

Could Netflix be about to follow the likes of Amazon Prime and allow users to download content to watch offline? When asked about the possibility during a recent earnings call, Netflix CEO Reed Hastings claimed that the company should 'keep an open mind on this'. This marks a clear shift in stance from last year, when a spokesperson for the company claimed downloads didn't represent 'a compelling proposition'.

### 10 Ultra HD video nasty

German distributor Turbine Classics has revealed that it will be releasing Tobe Hooper's 1974 horror *The Texas Chain Saw Massacre* on Ultra HD Blu-ray on May 27. Based on the same restoration as the 2014 Blu-ray release, the 16mm shocker will also be getting a 13.1-channel Auro-3D remix on its 4K disc debut!



## Premiere...

What's happening in the world of TV and films...

### Spidey comes home



Following his recent debut in *Captain America: Civil War*, we now know that Tom Holland's first solo Spidey movie will have the title *Spider-Man: Homecoming*. Yet rumours that Michael Keaton would play a villain have been shot down.

### Shark vs. Statham

Jason Statham has been linked to an adaptation of Steven Alten's 1997 cult hit novel *Meg*. The book sees a former U.S. Navy deep-sea diver asked to help hunt down a giant prehistoric megalodon shark that has escaped from the Mariana Trench and is chowing down on anything that gets in its way.

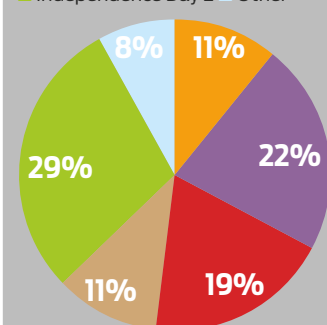
### Scooby Don't!

Warner Bros. has revealed that its upcoming *Scooby-Doo* reboot (currently titled *S.C.O.O.B. We swear we aren't making this up*) will be the 'first shot at unlocking the entire Hanna-Barbera universe'. Which suggests *Yogi Bear* v *The Flintstones* could be on the cards...

## We asked...

Which of this Summer's blockbusters are you most excited about?

■ Jason Bourne 
 ■ Suicide Squad 
 ■ Star Trek Beyond 
 ■ Ben-Hur 
 ■ Independence Day 2 
 ■ Other



Results from [www.homecinemachoice.com](http://www.homecinemachoice.com)  
Go online for more polling action





## Bad-ass Blu-ray

Deadpool → Twentieth Century Fox Home Entertainment  
→ Digital HD, Blu-ray, Ultra HD Blu-ray & DVD

Vulgar, violent and very funny, 'R-rated' superhero flick *Deadpool* has already broken plenty of box office records and will hope to do the same for the home entertainment market when it lands on June 13. After Fox teased fans with VHS and LaserDisc versions on April Fool's Day (pictured below), we can now confirm that the movie will actually be arriving on Ultra HD Blu-ray, BD and DVD, joined by bonus bits including two chat-tracks and something called *Deadpool's Fun Sack*...





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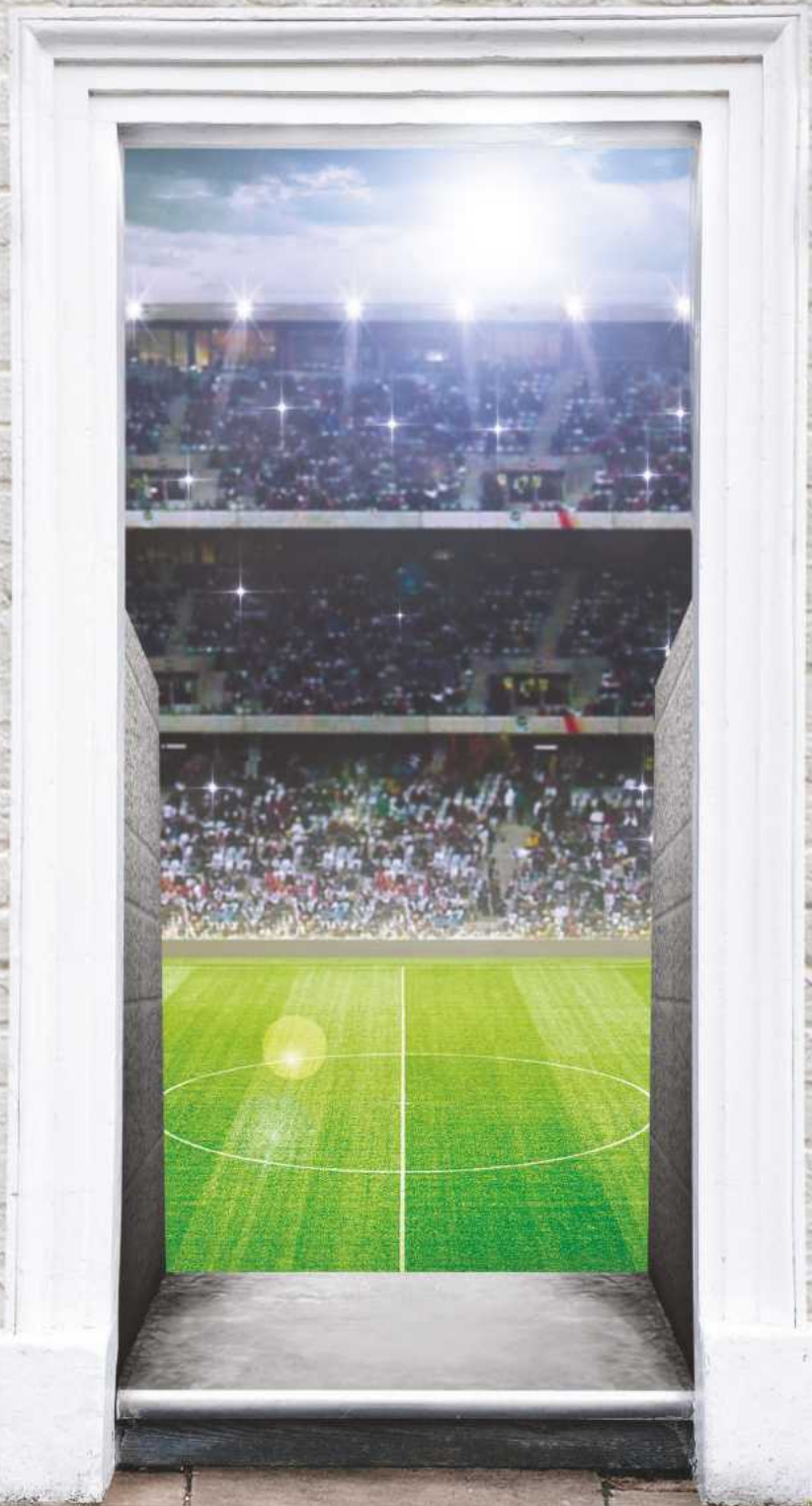
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## Face to Face

Topics of discussion on the HCC Facebook page

### On the first wave of Ultra HD Blu-rays



Bought the US 4K version of *The Martian* and the box was a little slimmer than the UK releases. Wish ours were slimmer as I am running out of shelf space!  
*Adrian Naunton*

I'm waiting for 8K as I think 4K will be short lived.  
*Michael Heard*

You've got it all wrong *Home Cinema Choice*. Like vinyl, Betamax will soon be back for the masses...  
*Chris Pulman*

*Life of Pi* is stunning. It really is a joy to watch – a truly cinematic experience.  
*Rich Griffiths*

### What you're watching on your home cinema...



*Mad Max: Fury Road* in 4K on my new Panny.  
*Paul Lissemore*

*Last Witch Hunter* on 4K UHD Blu-ray in 5.2.2 DTS:X, also on my new Panny!  
*Mark Edwards*

Between *Vikings*, *Outlander* and Moto GP I'm finally watching *Yukikaze* on DVD before the Tom Cruise live version comes out. Curiosity got the better of me!  
*Mike Short*

*The Bourne Trilogy*.  
*Brett Gidlow*

*Star Wars: The Force Awakens* will get a spin!  
*Alan Hoare*

I'd rather watch 136 minutes of a chimpanzee washing a cat than *Star Wars: The Forceless Hopeless Awakening* again.  
*Andy Summers*



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# Back of the 'net

Trailers, technology and more to check out on the web



### Super-fast broadband

In a canny bit of cross-promotion in the run-up to the cinema release of *X-Men: Apocalypse*, Sky has tapped superhero speedster Quicksilver to help plug its super-fast Sky Fibre broadband offering. Thankfully, the end result is a lot more enjoyable than those Harvey Keitel insurance ads...  
[youtu.be/YFMyEOuTfxY](https://youtu.be/YFMyEOuTfxY)



### The Doctor is in!

With the 'Civil War' over, Captain America, Iron Man, et al could do with some medical assistance. Sadly, Marvel's resident surgeon-turned-sorcerer Doctor Strange will be too busy to help as he's got his own movie hitting cinemas on October 28. Check out the teaser to see what tricks the film has in its first aid kit.  
[youtu.be/wwcSki7r9cQ](https://youtu.be/wwcSki7r9cQ)



### A sound idea?

The AV world loves its April Fools' Day pranks, and here's one worth checking out if you missed it last month, featuring KEF's head of acoustics Jack Ocklee-Brown explaining how you can improve sound quality of wireless speakers by, erm, using a new spray to remove water vapour in the air...  
[youtu.be/GVthrlUxQGk](https://youtu.be/GVthrlUxQGk)



### Statham overload!

Ever wondered what life would be like if everyone resembled Jason Statham? That seems to be the thrust of this flashy LG Mobile ad to promote its new 'modular' G5 handset, which sees the cinematic bruiser playing everyone from a bank robber to a dancing girl and a baby in a pram. Just. Plain. Weird.  
[youtu.be/tOpsnNf9Wj0](https://youtu.be/tOpsnNf9Wj0)



TOP PICK

### Re-record, not fade away

Those hankering for a VHS revival can check out this demo of how AV quality degrades once a VHS tape is copied. And then copied again. And again. By the time you've got to the unidentifiable mess of the 16th generation you'll be cherishing your digital hardware that little bit more.  
[youtu.be/mES3CHEnVyl](https://youtu.be/mES3CHEnVyl)



### Up from the depths...

After a gap of 12 years, Japan's Toho studio is hard at work on its 29th *Godzilla* film! Plot details are strictly hush-hush, but this trailer for *Godzilla: Resurgence* (aka *Shin Gojira*) showcases a decidedly beaten and bloody-looking Big-G done in traditional man-in-a-monster-suit style. Raaargh!  
[youtu.be/ysRIwIEBjuw](https://youtu.be/ysRIwIEBjuw)



# A force to be reckoned with?

MartinLogan Neolith → [www.absolutesounds.com](http://www.absolutesounds.com)

MartinLogan's towering electrostatic Neolith speakers can be yours if you've a spare £80,000 for a pair. These high-end made-to-order models employ a curved, ultra-light diaphragm for uniform sound dispersion, proprietary crossover designs and can be specced in colours ranging from Rosso Fuoco (pictured) to Basalt Black and Deep Sea Blue. Throwing bass into the mix is a rear-ported 15in woofer and a front-firing sealed 12in midbass driver. The brand says they deliver 'truth in sound'...





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# ULTRA HD BLU-RAY THE FIRST WAVE

The HDR/4K disc format has arrived promising real home cinema heroics. But with the initial batch of releases all back-catalogue titles, are they essential purchases? John Archer investigates



## *The Amazing Spider-Man 2*

**WHILE DISMISSED** AS borderline blasphemous by die-hard Spidey fans, *The Amazing Spider-Man 2* has plenty of thrills, good one-liners and even some heart – though it also tries to cram way too much in.

This next-gen release uses a 4K master of a 35mm print, delivering outstanding detailing that comfortably exceeds HD Blu-ray. Shots across New York have your jaw-hanging open at not just the fine detail on show but also the sense of depth revealed by having detail resolved so far into the distance. And the UHD BD makes brilliant use of HDR, boosting the brightness of exteriors and image peaks to gorgeous (but never forced) effect. The gloomiest areas of a sequence remain packed with shadow detail, and colours enjoy a saturation boost, adding to the punch and/or naturalism of almost every shot.

Sony is trying harder than most studios to utilise 4K assets for its UHD BDs, and on the evidence of this release it's a policy we wholeheartedly applaud.



## *Mad Max: Fury Road*

**WITH ITS RELENTLESS** action and intense visuals it's easy to see why Warner Bros picked *...Fury Road* for an early UHD BD release. The transfer, though, is a mixed bag.

Where detail is concerned, some shots – especially large exteriors – look scarcely any sharper than HD Blu-ray. In fact, some SFX backdrops can appear less natural. Yet close-up work usually looks a step up from 1080p.

Use of HDR is effective at enhancing such content as sunlight reflecting off metal and the white skin of Max's adversaries. Explosions and fiery highlights also look spectacular. However, some CGI flame effects just seem OTT. Another issue is that fast-moving cloud and smoke can exhibit apparent compression noise. More inconsistency finds some scenes appearing smooth and polished while others fizz with grain.

Lastly, a slightly processed overall feel suggests that upscaling a 2K master for UHD Blu-ray, as happened here, isn't an ideal solution.





## The Martian

**RIDLEY SCOTT'S DRAMA** about a lone astronaut trying to survive on Mars is the highest profile title in UHD Blu-ray's first wave (and only available in the UK bundled with Samsung's UBD-K8500 deck). A shame it doesn't sell the new format more convincingly.

While faces, space suits and relatively intimate interiors look sharper than the standard BD, you'll struggle to discern much extra detail at all with wide shots of Mars' surface. The image's baseline brightness is unusually dark for HDR too. Highlights are more intense than on Blu-ray, but the effect is generally relatively subdued. Colours, lush as they are, sometimes feel slightly unnatural. There's occasional colour banding in the Martian skies, too. Overall it looks good, but isn't the 4K poster boy I'd hoped for.

Matt Damon: not quite an Ultra HD icon



## The Maze Runner

**THIS FILM ABOUT** trapped teens trying to find a way through an ever-changing maze struggles to develop sympathetic characters but delivers plenty of spectacle – and in this regard the UHD Blu-ray version services it well.

HDR is used to sterling effect. The far greater intensity and brightness it brings to the picture serves the film in delineating the distinct differences in (real and psychological) space that exist between the maze and the relative safety of the glade. The black level reach is far ahead of the Blu-ray too, and colours are rich and bright.

The extra sharpness and luminance of the UHD BD can make background effects look a little more artificial than on the 1080p disc. The picture also looks a little noisy, but given the care taken with the other elements, I can only assume this is intentional.



Not exactly what you'd call a-maze-ing

## Sicario



**THIS RIGHTLY LAUDED** thriller about an FBI agent drafted in to hunt a drug lord might not sound like an obvious Ultra HD hero. Actually, though, it's a 4K feast.

Detail levels on this US disc are epic, leaving the BD looking weak by comparison. Even better, every frame enjoys the same noiseless finish – possibly the result of the film being shot digitally at 3.4K and mastered to 4K for its Digital Intermediate.

An extensive use of natural lighting reaps HDR benefits, giving images an at times almost luminous quality. Dark areas enjoy deep but authentic black levels packed with subtle detail and colour, while brighter hues are natural in a deliberately muted way.

Add in an Atmos mix and it's a superb UHD BD showcase.



## CHAPPIE

**THE CHAPPIE DISC** doesn't sport the Ultra HD Premium logo, but it's still a tasty transfer. Derived from a 4K DI, the image is detail-rich and free from noise or grain. The added sharpness doesn't make the all-important visual effects look any less realistic, though.

The UHD BD greatly opens up the image's dynamic range, too. Image peaks and the overall brightness of exteriors, or brightly-lit sequences, both look far punchier than the standard Blu-ray, while predominantly dark scenes appear so much more dynamic they almost look like a different film.

I spotted occasional slight brightness 'pulsing' over large areas of monotone colour, but such moments are rare and detract only slightly from an impressive example of what the format can do.



## Hancock

**YOU WOULDN'T THINK** a comedy superhero movie starring Will Smith could go wrong – but somehow this one does. The good news is that, as with all Sony Pictures UHD BDs so far, this uses a 4K digital master of a 35mm film print. As a result detailing is outstanding, with the transfer delivering not just every detail captured on film but also that classic cinematic quality and natural look – including grain – that movie fans love.

The picture isn't as showy in HDR terms as some titles; in fact colours are more subdued and the baseline brightness is darker than the Blu-ray version. But there's a much more expansive luminance range, and the colour palette is more natural and subtly delineated. In other words, HDR is being used to deliver images that look more like how we see the world, rather than creating stylised HDR effects.



## UHD BD: Who's in?

### Not Disney, certainly

Even at this early stage, studio support for Ultra HD Blu-ray is strong, with 20th Century Fox, Lionsgate, Sony Pictures, Warner Bros, Universal and Paramount all lining up releases. However, not all have confirmed UK release schedules – importing the region-free titles from the US is the way to go for early adopters.

And then there's Disney. The House of Mouse has never been the most devoted supporter of home media (consider the way it regularly discontinues disc releases to lock them back in the vault) and so far has revealed no plans for UHD Blu-rays. Which is no doubt a downer for fans of the *Star Wars* franchise and Marvel superhero movies.



## Exodus: Gods and Kings



### RIDLEY SCOTT'S

**BIBLICAL** epic may divide opinion, but it still makes for a tasty Ultra HD Blu-ray demo disc thanks to its huge visual dynamics. The transfer's luminance range is truly extreme, featuring intensely rich sunlight, glinting gold armour and blazingly vibrant torchlight at the bright end of the spectrum. There's extreme (though still detailed) blackness at the other. Intense colours lend even more beauty to Scott's vision of ancient Egypt.

Be warned, though: some scenes (especially Chapter 7) pose a serious challenge to current HDR-capable TVs.

Detailing in foregrounded content is excellent, but large-scale shots can look slightly soft and hazy – perhaps on account of the film's 2K heritage.

## The Last Witch Hunter



**AVAILABLE FROM THE US**, this fantasy film is an interesting UHD experience, if not for entirely positive reasons.

Picture quality is mostly decent. The image is slightly (though not spectacularly) more detailed than the Full HD Blu-ray, and colours look richer – though at times this strays too far, with skin tones looking slightly 'ripe'.

The film doesn't exploit UHD BD's expanded luminance range much, and is mastered to quite a dark baseline light level. This may accord with the director's vision, but it doesn't make for a very spectacular demo disc.

One extra little niggle is the way the cleanliness of the image draws more attention to a loss of focus over the top section of the picture – an artefact, we can only presume, of the type of lenses used to capture the film.



## X-Men: Days of Future Past

**ARGUABLY THE BEST** of the *X-Men* films (once the early exposition stuff is out of the way) ...*Days Of Future Past* is a hit and miss UHD Blu-ray. While some scenes enjoy a clear 4K resolution boost, others deliver precious little detail beyond the Full HD Blu-ray. This may well be due to the 2K digital source, but that doesn't fully explain the inconsistency.

Happily the UHD Blu-ray is on safer ground with its HDR. Bright elements in mostly dark scenes look strikingly intense and luminous, colours are more richly saturated (Mystique's blue skin is a great example) yet also smoothly blended, and the expanded light-to-dark range produces a greater sense of solidity and volume, really enhancing contrast-rich sequences like Trask's senate presentation.







## Kingsman: The Secret Service

**DESPITE APPARENTLY ONLY** having a 2K master to work with,

Fox has produced a UHD BD picture that is much cleaner and more detailed than the regular Blu-ray. Richly decorated interiors like the tailor's shop look more 'lived in' and real as a result, while exteriors enjoy a sense of scale with detail resolved far into the distance. If only all upscales looked this good.

*Kingsman...* also explodes with colour and extra luminance, and the attention to HDR detail extends to dark and bright sequences in equal measure. The only downside is that the general sharpness slightly exaggerates an occasional loss of focus along the film's top and bottom edges.

## Pan



**THIS INCOHERENT, CLUNKY** and determinedly artificial-looking Peter Pan origin story is a disappointing UHD Blu-ray experience too.

For starters it looks unusually soft, with only occasional scenes delivering any significant extra sharpness or detail over the Full HD Blu-ray. Visual effects backdrops like the quarry face during the bizarre *Smells Like Teen Spirit* sequence look both artificial and so soft they're practically out of focus.

Also strange is how little the UHD Blu-ray transfer uses HDR to improve dark scenes. Brightness peaks are only mildly more intense, and black levels receive only limited extension. Bright scenes, on the other hand, enjoy a marked lift in their peak intensity. Colours throughout the film look pretty spiffing.



Peter Pan searches for a script doctor

## Ender's Game



**THIS TALE OF** a boy genius groomed to save the world from aliens feels strangely flat despite its solid premise and spectacular effects. Curiously, some aspects of this imported US Ultra HD Blu-ray's transfer fall flat too.

This isn't the case regarding sharpness and detail, though. Despite likely deriving from a 2K digital intermediate, the 4K visuals look more detailed than those of the Blu-ray with both close-ups and large-scale shots. There's also positive impact from HDR, with some stunning extra intensity in the film's many artificial light sources and a generally more pumped-up feel.

Colours, though, can feel bleached, and while dark areas contain impressive gradations, black levels appear more profound on the Full HD disc...

## Also on sale

Want a bumper set of UHD discs? Then get these, too

### Maze Runner: The Scorch Trials

This 'Young Adult' sci-fi sequel takes the action out of the maze with a DTS-HD MA 7.1 mix

### The Expendables 3

Sourced from a 4K DI, Stallone's explosive three-quel is available from Lionsgate in the US

### Life of Pi

Ang Lee's vibrant fantasy really benefits from HDR's broader colour spectrum

### Hitman: Agent 47

While this videogame adaptation is more miss than hit, it still looks pretty impressive in 4K

### Fantastic 4

Don't expect too many Ultra HD thrills from this underpowered superhero reboot's inherently drab visuals

## San Andreas



**THIS EPIC DISASTER** flick proves somewhat disappointing as an Ultra HD Blu-ray experience.

The main problem is that it struggles to deliver any sense of enhanced detail versus the already impressive 1080p Blu-ray. Just

occasionally you can see a little more detail in extreme close-ups, or a mid-scale shot may contain a slightly enhanced sense of depth. But for the most part this picture looks like what it is – an upscale of a 2K master. At times I'd even say the regular Blu-ray looks a little more natural.

The UHD Blu-ray does deliver more impact over the Blu-ray in both colour intensity and brightness terms, at least during sun-drenched exteriors. Interiors feel a little drab, though, and dark scenes also lack some of that HDR 'wow' factor.



## Salt



**WHILE SALT'S TALE** of a CIA agent accused of being a Russian spy lacks the script to support its action flair, it delivers another impressive – though not Ultra HD Premium certified – UHD Blu-ray.

Like *The Amazing Spider-Man 2*, this platter uses a 4K digital master taken from a 35mm negative, and the results are very similar. Detailing enjoys a substantial boost over the 1080p Blu-ray, with the quality of the digital master even capturing the 35mm print's natural grain.

Luminance dynamics are remarkably natural, delivering that same expansive, yet subtle, range of light levels noted with *ASM 2*. Colours aren't as explosive as those of some UHD BDs, but this merely proves HDR can be used to make colours look more accurate rather than just pushing greater dynamics.



A Jolie good Ultra HD presentation





## The LEGO Movie



AS MUCH AS I love the energy, humour and heart of *The LEGO Movie*, I wasn't sure its unique animation would make for a great UHD Blu-ray. Happily, I was wrong.

HDR's luminance range and expanded colour gamut bring the plastic world to life like never before. The brighter light peaks on the LEGO blocks makes them seem more three-dimensional, while the additional colour vibrancy makes the various LEGO realms even more vivid. Greater luminance also increases the sense of space in the settings, and brings a more filmic look to the action.

The UHD BD also benefits from a clear increase in detail. I could see extra textures and even signs of wear on the movie's 'plastic' pieces I just wasn't aware of on the original Blu-ray release ■



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# Philips upscales Ambilight in battle for TV top spot

Can Ambilight and 4K HDR prove to be consumer catnip for Philips? **Steve May** reports from TP Vision's European showcase



**PHILIPS IS DETERMINED** to claw its way back into the TV limelight, and plans to use every trick in the book to reclaim its European TV throne. 'We will be the number one TV brand in Europe very soon,' insisted TP Vision general manager David Kou at the brand's recent Euro showcase.

Given the marque had all but bolted from the UK high street a couple of years ago, his assertion sounds almost ridiculously bullish. But the company, always a tech powerhouse, has some remarkable new televisual toys it wants you to play with.

For those struggling to keep up, the Philips TV brand is now predominantly owned by TP Vision. Originally a joint-venture with Philips in 2012, TPV acquired all shares, and as a consequence the Philips TV brand licence for multiple territories (but not North America), in 2014. TPV is a huge, if anonymous, display maker with the likes of Sony, LG, Acer and Panasonic as customers.

Since the takeover, the company has been on the mend. Last year, it became the top-selling foreign brand in China. 'Our ranking went from 14 to 8 in a league table of all TV brands, and the top seven were all local,' boasts Kou. 'In South East Asia... we have successfully beaten the Korean vendors there, so that means we can replicate this success in Europe...'

To help reach this goal, Philips has upgraded its Ambilight rear-lighting tech with the altogether more dramatic AmbiLux, and is pushing 4K screens hard. AmbiLux swaps side lights for a wheel of Pico projectors that simulcast what's being broadcast

across the wall behind it – albeit it in a blurry sort of way. A variety of filters can be applied, from soft to strobe. While the effect may not be conducive to a purist home theatre viewing experience, it's great fun when gaming and adds a crazily immersive lightshow to musical content. The first AmbiLux 65in model, the 8901, is initially a Harrods exclusive.

There's no official word on more AmbiLux screens, but talking with Philips executives there's a little sparkle in their eye that hints there might be more lighting lunacy to come...

## A change of Tack

And then there's OLED. The brand will launch its first 55in model around IFA in September, says product specialist Danny Tack. Tack has been sniffy about OLED in the past, citing lack of inherent brightness as a reason to stick with LCD, but he's clearly changed his mind. 'LG Display has now resolved early issues, such as brightness and colour performance,' he told HCC.

Tack suggests that Philips' OLED offering will retail for much the same as LG's comparable model, but he's quick to say: 'We will add our own picture processing on top of that, which means we will give people a better viewing experience.'

Another reason for Philips' OLED conversion is price. On the OEM market, Tack says OLED panel technology is becoming far more viable. 'That was one of the big burdens a year back. An OLED was three times the price of our expensive 9000 LED



TP Vision general manager David Kou believes Philips can become the number one TV brand in Europe

Philips' smart TVs, from the 6401 model upwards, are based upon an Android OS







model – and sooner or later, OLED will grab the top of the market. And HDR is one of the drivers for that.' Although unconfirmed, it was hinted that OLED could take up the mantle of 9000 Series for the brand.

While Philips' OLED debutante was out of view during my Brussels preview, I did get an eyeful of a massive range of new 4K UHD LED models.

HDR compatibility starts with the new 6 Series screens, although don't expect a high brightness here. If you're looking for a well-specified Ultra HD 4K TV, the 7601 Series is probably one to shortlist. This features 2D local dimming technology, where the direct LED dimmable backlight divides into 128 independent zones. The technique has trickled down from the brand's 2015's 9000 flagship, which never sailed to the UK. From my demos it appeared effective.

Danny Tack candidly admits none of the screens shown to *HCC* qualify for Ultra HD Premium certification, not least because they don't deliver the 1,000 nits required by the standard. The 7601 Series has a peak light output of 600 nits, while the 7101 is a 400-nit display. The 6401 and 6501 are 350-nit/400-nit screens respectively.

## Content conversion

One tech demo that certainly raised eyebrows featured a proprietary HDR upscaler for regular SDR (Standard Dynamic Range) content. While still in development, side-by-side demonstrations, using sequences from *The Great Gatsby*, gave a convincing

lift to brightness and colour. Images from an SDR source really did seem to replicate the dynamism and subtleties of genuine HDR.

'We're adding more processing this year to give us the look and feel of real HDR,' revealed Tack. 'Gamma correction, better colour, that kinda stuff. When there's more light in your display, there's more room for us to do a better job.'

But Philips' HDR ambition stops – for the time being, anyway – with HDR 10. As yet there's no commitment to Dolby Vision. 'All [HDR] content will be open standard, but not all content will be Dolby Vision,' explains Tack.

As for 3D, Philips is no longer supporting it on any of its new sets. '3D is dead. There are no 3D sources. Nobody wants it. It complicates the TV a lot,' I was told. 'There is no good reason to keep on pushing 3D. Even LG, which has invested billions in its Film Patterned Retarder and production labs is dropping it.' So that's that then.

Similarly, the brand has no plans to release curved panels in Europe, although it did admit to making a 65in curved set for the Chinese and Latin American markets. 'As a brand we're not a fan of curved,' confides Tack. 'With curved there are so many deformations in the picture. Flat gives you the best picture quality. The market is declining. There is no good reason to continue with curved.'

So, 3D gone, curves ignored and HDR pushed right to the fore. Can this strategy see Philips grabbing the TV crown? Time will tell ■



At the Brussels Philips preview, demos included HDR v SDR, and HDR upscaling of regular content

# You've been framed

The shape of movies remained mainly unchanged for 50 years, but the widescreen boom of the 1950s introduced a myriad of competing formats – some of which survive today. **Martin Dew** unravels the history of aspect ratios and discovers that projection is best when it comes to home AV

**WHEN YOU RELAX** into a cinema chair for that long-awaited blockbuster, icy drink in cup holder and bag of popcorn balanced on lap, it's a fair bet that the last thing on your mind will be a shape of the big white screen in front of you. Chances are that your movie will be shown in one of two commonly used aspect ratios – 1.85:1 or 2.39:1, typically referred to in the filmmaking world as flat and CinemaScope respectively. But you might witness something a little more unusual – 2.0:1 or a retro-tinged 1.37:1. And turn the clock back sixty years and it would have been a different situation entirely.

The history and evolution of aspect ratios is complex. Cinematographers rightly pride themselves on their academic knowledge of the subject, but regular movie fans – and even some film directors I've chatted to – often don't know their VistaVision from their Techniscope. So time for a quick recap...

## We've been aspecting you...

An aspect ratio is always expressed by two numbers separated by a colon. The first, usually larger, number represents the width, while the second, usually smaller, number represents the height of an image. For example, a 4:3 aspect ratio film, or other picture content, when projected onto an 8-foot-wide screen will be 6 feet in height. While 4:3 is a ratio described in whole numbers (as above), more commonly you will see it written as 1.33:1. This system uses a '1' to represent height and a decimal for width. Hence 16:9 becomes 1.78:1.

Content creators don't randomly select these image shapes, of course. Quite the opposite is true. A director may shoot in an impressive widescreen format when conveying expansive vistas – think Westerns – while another may choose to photograph with a comparatively square image like 1.33:1 if, for example, they feel the characters in the story are

The Academy Ratio (used for *Casablanca*, below) originated when an optical strip was introduced to 1.33:1 film, thus reducing image area width

Paramount's VistaVision format (1.85:1) arrived in 1954, and was used by Alfred Hitchcock's *Vertigo* in '58







emotionally trapped, or wish to give an intentionally old-fashioned look to a piece. By the same token, a documentary maker will frequently choose a 1.78:1 aspect ratio to instil a sense of immediacy and realism, as the majority of current affairs coverage for TV is captured in this form. Some directors are known for favouring a particular ratio almost exclusively – John Carpenter, for instance, plumps for 2.35:1 – while others, including Steven Spielberg, have flitted between flat and CinemaScope throughout their career, depending on the movie. Whatever the filmmaker decides upon, you can be sure that the aspect ratio is never an accident.

Widescreen hasn't always been with us, though. Shuttle back to the dawn of cinema and 4:3 was king. And you can blame serial US inventor Thomas Edison – once Eastman Kodak began to produce flexible film in the early 1890s, Edison's staff photographer, William Kennedy Dickson, settled on using 35mm film for a peephole device, known as the Kinetoscope. Although no one knows quite how a 1.33:1 aspect ratio was arrived at, the legend is that Edison demonstrated a shape just wider than a square with his hands to Dickson. The image size on the film stock was four perforations high and, from 1909 onwards, this would become the default standard for all film shown in the US and beyond.

The next step in cinema's evolution saw movies grow ever so slightly wider. With the advent of sound in 1929, space needed to be made on the film stock

itself for a strip of optical audio information running alongside the image. The Academy of Motion Picture Arts and Sciences (of Oscar fame) weighed in, and in 1932 decided the image should be slightly reduced in size (although still four-perf), to 1.37:1. This was consequently named Academy Ratio, and is the format that would consolidate the look of movies for another 20 years. Throw *Casablanca* or *Citizen Kane* into your disc spinner to see iconic examples.

So what started the widescreen boom? Funnily enough, it was TV. By the early 1950s, cinema audiences were beginning to taper off as 1.33:1-shaped TV sets found their way into living rooms. Film studios reckoned drastic action was required to motivate bottoms off of sofas and back into the fleapit.

A 1952 technology known as Cinerama, and culled from a WWII military simulator, used three synced 35mm (6-perf) cameras to capture an astounding 2.59:1 aspect ratio with a 147-degree field of vision. The resulting cinema presentation used three projectors and a curved screen. Although a number of travelogues were produced for Cinerama venues including, most famously, *This is Cinerama*, it wasn't until 1962 that the first and last feature film titles in the format appeared: *The Wonderful World of the Brothers Grimm* and *How The West Was Won*. Yet the unwieldy economics of the system, combined with a rigid photographic focal length – and not always seamless joins between three projected onscreen

**The introduction of 65mm film introduced ultra-wide presentations, such as *Ben-Hur's* epic 2.76:1**



**CinemaScope (2.35:1) challenged VistaVision by offering an even wider image, and debuted on Fox's *The Robe***





*Shane* was released theatrically at a cropped 1.66:1 (above left) aspect ratio, having been captured at Academy Ratio on 35mm film (above right)



images – meant that competitors were hot on the trail for more efficient widescreen gizmos. See *HCC* #249 for more on Cinerama.

While nowhere near as wide, Paramount's 1953 hit *Shane* used a 1.66:1 aspect ratio that the studio considered to be a major selling point. Originally shot in 1.37:1 Academy Ratio, the top and bottom of the image were lopped off (masked) to allow a widescreen showing in cinemas without the need for special lenses or projection equipment. Meanwhile, at around the same time, boffins at Twentieth Century Fox cultivated a 1920s French technology invented by Henri Chrétien known as the Anamorphoscope. A film shot with an 'anamorphic' lens would squeeze an image from side-to-side by a factor of two; when the same film was projected with a '2x' anamorphic lens in the cinema, the image was 'unsqueezed' to deliver a 2.35:1 aspect ratio.

*The Robe* was the first title to use this new 4-perf 35mm process, dubbed CinemaScope, and soon all the studios followed suit.

Except Paramount. Having been first out of the gate (by a year) with the 1.66 post-Cinerama process, it countered the studio CinemaScope consensus with VistaVision. This side-winding 8-perf system used a 1.85:1 aspect ratio and overcame the problem of visible grain on anamorphic prints inherent in the squeeze/unsqueeze action. Alfred Hitchcock was a notable proponent of the format, and VistaVision was used to startling effect on *Vertigo* (1958) and *North by Northwest* (1959).

Two aspect ratios that would come to dominate cinema for decades had been born, yet more 35mm technologies entered the fray in the 1950s, including another three camera/three projector process called Cinemiracle, as well as anamorphic systems branded

by studios or independent developers, many of which were short-lived.

Arguably the two most important widescreen breakthroughs of the era were Todd-AO and MGM 65, both of which used 5-perf 65mm film stock running vertically through the camera. In both cases, the release prints were delivered to cinemas on 70mm stock (the extra 5mm of width being preserved for multichannel magnetic sound strips).

Todd-AO theatrical releases included Rogers and Hammerstein classics *Oklahoma* (1955), *South Pacific* (1958) and *The Sound of Music* (1965), and sported a 2.2:1 aspect ratio, using spherical, not anamorphic lenses. Meanwhile, Panavision

**'So what started the widescreen movie boom of the 1950s? Funnily enough, it was television'**

developed 1.25x anamorphic lenses for the MGM 65 system, which resulted in perhaps the king of all widescreen films *Ben-Hur* (1959), with its 2.76:1 aspect ratio. On the back of MGM 65, Super Panavision 70 followed, a 2.2:1 spherical system, like Todd-AO, that was deployed on David Lean's *Lawrence of Arabia* (1962).

Audiences were now treated to a dizzying range of film formats, but in the latter half of the 1960s the age of widescreen and theatrical spectacle went into retreat, and the industry consolidated on two predominant aspect ratios: 2.35:1 anamorphic (or 2.39:1 depending on projector aperture), and 1.85:1 (a 1.37:1 image size masked at the top and bottom).

Even in our current age of digital cinema, these two image dimensions prevail. Developments since have been sparse. The most famous is from Canadian company IMAX, which debuted its horizontal 15-perf 70mm system in the 1980s, and introduced the concept of large format cinema with its towering, ultra-high-resolution 1.43:1 images, projected on screen sizes of up to 66ft tall and 90ft wide. A number of exhibitors promote similar experiences today, usually combining stacked 2K or 4K digital cinema projectors.

Yet while the technologies haven't altered much, filmmakers continue to dabble and in recent years there has been an upsurge of interest in the use of

*The Robe* played up its CinemaScope format – and took a swipe at 3D movies, too





retro aspect ratios. Wes Anderson flipped from 1.85:1 to 2.35:1 to 1.37:1 in *The Grand Budapest Hotel* (2014) to represent different time periods of the story; László Nemes lensed his Oscar-winning Holocaust drama *Son of Saul* (2015) on gritty 1.37:1 16mm stock to heighten a sense of newsreel verisimilitude. The 2015 sci-fi fantasy *Tomorrowland* harked back to the Todd-AO era with a 2.2:1 ratio, while Quentin Tarantino sourced 2.76:1 Ultra Panavision 70 lenses and equipment for *The Hateful Eight*, the first time they had been used since 1966's *Khartoum*, to pay tribute to the golden era of widescreen splendour.

## Boxes on the box

While cinemas can be flexible in their presentations, in home entertainment circles film fans have been more constrained. The 4:3 format dominated TVs for decades – HCC was still reviewing such sets in the 1990s.

Domestic AV has, though, finally caught up with the multiplex with the introduction of widescreen hardware. Standards for HD video were actually determined in the 1980s and the aspect ratio of choice for TVs and broadcasters was announced as 1.78:1 (or 16:9). The number was not arbitrary, but an average mathematical value sitting precisely between 2.35:1 and 1.37:1, and was deemed an adequate compromise for playing back both types of content. Furthermore, 1.78:1 was close enough to the masked theatrical aspect of ratio of 1.85:1, the format already widely selected for cinema prints.

The above explains why early-adopter 16:9 TV owners were perplexed by the presence of black bars when watching movies on their new sets. Surely that was all meant to go away when they dumped their 4:3 CRTs? Unfortunately, 2.35:1 films were still going to exhibit top-and-bottom black bars, and 1.37:1 content now displayed vertical side bars, known as 'pillarboxing' (the latter causing cruel burn-in symptoms on early plasma screens if unsuspecting owners were unaware of the problem). The only solution in both cases – if desired – was to use a TV's zoom out function where available to remove the offending black lines, but at the expense of losing picture information. Not an ideal remedy for film purists.

Projector owners are better served, and there are plenty of ways to wow your audience at home on movie night if you have a commanding knowledge of aspect ratios. Framing a 2.76:1 epic like *It's a Mad Mad Mad Mad World* or a 1.33:1 Buster Keaton classic on your man-cave wall will blow your guests away, and convince them that you really are the AV genius you always insisted you were.

While most home cinema devotees, for practical purposes, opt for the 16:9 fixed frame or drop-down variety, by far the most impressive way to present Blu-ray or streamed content is with a native 2.35:1 or 2.40:1 screen to enable what is known as CIH (constant image height) presentation. This will mean that your cinema is maximised for, and tailored to, presenting CinemaScope content. There are two ways to fill up your entire screen area for such titles: zooming (manually or with lens



## 2.0:1 – Hollywood's halfway house?

Vittorio Storaro's Univisium format is gaining traction in the 21st Century

Acclaimed *Apocalypse Now* cinematographer Vittorio Storaro proposed a ubiquitous aspect ratio of 2.0:1 for filmed content in 1998. Positioned as a one-size-fits-all compromise to overcome the screen dimension face-off between widescreen cinema and hi-def TV, this new aspect ratio would sit between the two, and required only three perforations per frame, reducing film stock costs by 25 per cent. Although not widely adopted, Storaro did shoot some of his projects (including *Exorcist: The Beginning*) in the format.

And Storaro's Univisium idea is showing signs of taking hold. The format reared its scary head last year with *Jurassic World*, when director Colin Trevorrow insisted on an aspect ratio between 2.35:1 and 1.85:1 that would look good in both the cinema and at home, but would boost height perception of the dinosaurs and complement lofty IMAX screens. Reports from punters came in that the film was being wrongly masked to 2.35:1 in certain cinemas, somewhat diminishing the point of Trevorrow's choice. Fans of Netflix hit *House of Cards* also noticed thin black bars on their 16:9 sets, as the creators too decided to frame the political drama in 2.0:1, not 1.78:1.

memory), and anamorphic lenses. The first method involves adjusting the zoom function on your projector (assuming you have already accurately calculated your throw distance parameters), pausing your disc spinner on a full, bright 2.35:1 image, and gently nudging the lens control until the borders of the picture bleed slightly over the black perimeters on all sides of the screen. Although this is the cheaper method of the two, the disadvantage here is that you aren't using the full brightness capabilities of your PJ (some its light output is wasted off-screen) and you're only getting about 820 lines of vertical resolution (all Blu-ray 2.35/2.40 titles are masked during the mastering process). You will also need to zoom back in manually, or with your lens memory function, to revert to 16:9 content.

The second, and distinctly more expensive method, is to purchase an anamorphic lens. There are motorised and non-motorised versions available from companies such as Schneider Optics and Panamorph. The function of these devices is to take a 16:9 image and 'unsqueeze' it to fill a 2.35:1 or 2.40:1 screen, with the added advantage of using every pixel of the 1,920 x 1,080 (or 3,840 x 2,160) optical panel in your projector. You will also need a projector or video processor with an anamorphic function, one which can electronically interpolate and create a 'squeezed' 16:9 source image by literally 'stretching' it in the vertical plain. The added vertical >

Some of 2014's *The Grand Budapest Hotel* was framed at 1.37:1





resolution achieved with an anamorphic lens adds dimension and detail to the picture, and reduces the possibility of viewers detecting pixel structure. You also benefit from the added brightness of the image as a direct result of using all available pixels.

The cost, however, can be prohibitive, with many of the lenses sitting at around the same price point as a good 1080p projector, and the setup can be painstaking. Particular attention also needs to be paid to the throw specifications of the lens before ordering. Cheaper fixed (non-motorised) anamorphic lenses require that you watch standard 16:9 content with a corresponding reduction in resolution, so beware of that downside too.

## Behind the mask

Another alternative is masking. Many of the specialist screen manufacturers produce natty motorised masking systems with electronic presets for 2.40:1, 1.85:1, 1.78:1 and 1.33:1, as well as full control of customised settings beyond. Some products mask

**'The cost of anamorphic lenses can be prohibitive, about the same as a good 1080p projector'**

vertically (top and bottom), and others, horizontally (from the sides), usually with velour or light-absorbent black panels.

A budget solution to side-masking for a 2.35/2.40:1 screen, and one I use, involves purchasing a couple of 0.5in rigid foam insulation panels from a hardware store and cutting them to the height of your fixed frame screen. Keep the factory-cut sides free for image framing duties on either side of the screen. Cover and wrap both panels with black velour material, making sure that the framing edge is pulled taut for a precise boundary, and use a staple gun and



**HCC's Martin Dew has his own DIY masking system using foam insulation, black velour material and Velcro**

double-sided industrial tape to fix the material on the rear-facing sides. Black Velcro squares can then be attached to the corners of the rear-facing sides of the panels, with strips of black Velcro then attached to the frame of your screen.

Then use a test pattern built into your projector (if available), or a movie framed in the intended aspect ratio, to make sure that the placement of your panels onto the frame is accurate. This last step takes a few minutes to get right, as you will be doing it mostly by eye, so one limiting factor with this method is that you can't realistically change aspect ratios midway through a movie binge. But it works a treat, and both you and your audience will love it. Whatever content, you have absolute control over the final look, and your little DIY job should only cost you about £40. And the same method can be applied for top and bottom masking panels on a 16:9-shaped screen.

Remember: aspect ratios are there to be respected, so work with them if you can! ■

## Blu-rays for widescreen junkies



### Ben-Hur (1959)

This luscious Warner Bros frame-by-frame restoration of William Wyler's award-winning epic is presented in its original 2.76:1 aspect ratio, letting you marvel at the scale of the choreographed chariot race, row-upon-row of marching centurions, or matte paintings seemingly spilling out into infinity. Its tale of the undulating fortunes of Jewish

nobleman Judah Ben-Hur during the life of Christ still resonates today. Add in Miklós Rózsa's stirring score and you might think cinema has never been bettered.

### Lawrence of Arabia (1962)



David Lean's critically acclaimed masterpiece recounting Lawrence (Peter O'Toole) uniting disparate Arab factions to defeat the Turkish Empire bounds onto the screen with stunning detail and clarity. Sony's intricate 2.20:1 film-like restoration from a 4K master/8K scan does absolute justice to the sweeping desert panoramas, yet scores highly on shadow detail too. If you ever finish gawping at the sheer beauty of this platter's wide-lensed image quality, you'll find Robert Bolt's complex and multi-layered script a revelation.

### How The West Was Won (1962)



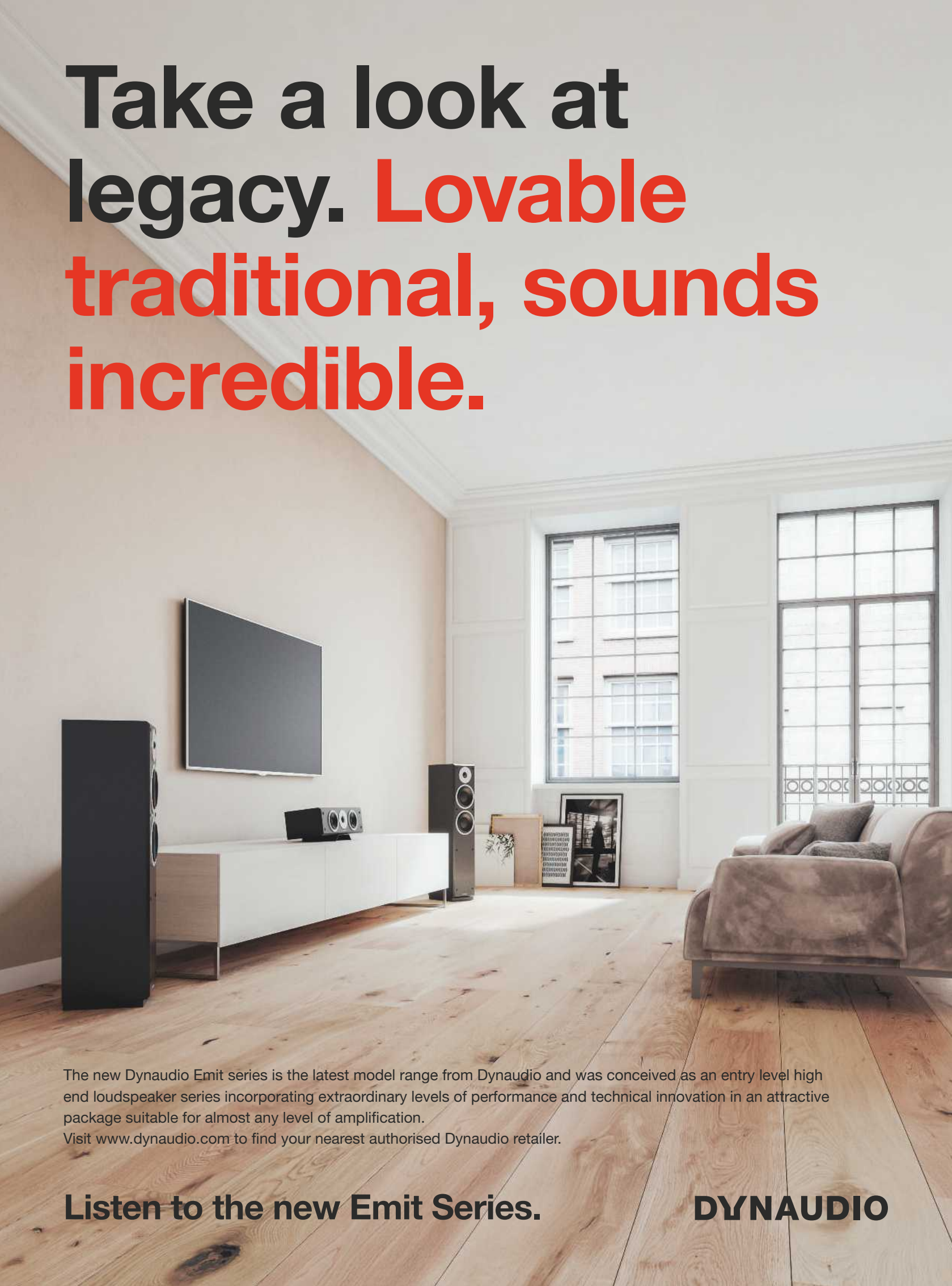
Follow four generations of the Prescott family as they blaze a trail westward across the vast landscapes of America, from New York to the Pacific Ocean, during and after the Civil War. Spot the two joins on the screen where the three-camera Cinerama process makes its mark, and then give the included bonus 'Smilebox' full movie version a whirl, an intriguing curved screen facsimile of the view that 1950s moviegoers would have enjoyed.

### The Dark Knight (2008)



Christopher Nolan's dark and cerebral caped crusader yarn sees Christian Bale battling it out in violent style against Heath Ledger's Joker, and throws some aspect ratio curve balls too. Nolan regularly jumps the framing from 2.40:1 to 1.78:1, specifically for the scenes which were shot with IMAX 15-perf film cameras. Warner's VC-1-encoded transfer for the 2008 Blu-ray release is generally magnificent, with involving depth and detail in the IMAX-captured sequences. That said, some perceptible edge enhancement takes the shine off a touch.





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# Home cinema's looking up



## CINEMA ROOM KITLIST

**DATASAT:** RS20i home cinema audio processor;  
RA7300 seven-channel power amplifier

**PROCELLA AUDIO:** 2 x P15 active subwoofers

**TRIAD:** 3 x in-wall Gold/6 LCR speakers; 4 x in-wall  
Silver/4 surround speakers

**RUNCO:** LS-12d active 3D PJ with anamorphic lens

**SCREEN RESEARCH:** 3.3m X-Mask TheaterCurve  
acoustically-transparent projector screen

**KALEIDESCAPE:** Movie Server; 3 x M700 Disc Vaults

**CONTROL4:** EA-1 Controller; touchscreen

**WYRESTORM:** HDBaseT video matrix


**FORTRESS:** Seating

**CINEMA ACOUSTICS:** Absorbers/diffusers

**LUTRON:** LED lighting; electric blackout roller blinds

**CUSTOM:** DMX-controlled star light panels





Sitting above a double garage, this high-end roof-space theatre offers constant height projection and potent 7.2 audio

**WHILE IT'S NOT** unusual to see loft spaces repurposed as dedicated home cinemas – why use your attic to store a legacy VHS collection when you can be watching Blu-rays in there instead? – this issue's professional install is actually located in the roof space of a double garage. Designed by London's Automated Smart Homes, it finds space for six luxurious Fortress recliners and a discreet 7.2-channel speaker system.

Typically for a loft conversion, the project had to work around the room's low, sloped ceilings. No surprise, therefore, that a 2.40:1-ratio screen was chosen to extract as much real estate from the front wall. Opting for this format meant a 3.3m fixed-frame model from Screen Research could be accommodated, an anamorphic lens for the 3D Runco projector and automated masking catering for differing movie content.

The room is all about comfort, ease of use and high-quality AV. On the audio side, in-wall Triad speakers are coupled to separate amplification and processing from premium marque Datasat, while a brace of Procella Audio subwoofers deliver sub-20Hz rumblings. For movies, the cinema is served by a Kaleidescape rack including a trio of M700 Disc Vaults that provide an artwork-rich user experience without having to waste time skipping through trailers, piracy warnings and menus.

Our favourite finishing touch is the custom fibre optic ceiling panels used to create an outdoor 'starry night' atmosphere – surely perfect for a run-through of *Gravity*... ■





**A. Icing on the AV cake**

Automated Smart Homes has made a feature of the ceiling with custom-built fibre optic star panels

**B. Cinematic six-pack**

The six Fortress recliners are arranged over two rows, with the rear quartet raised on a stage to ensure line-of-sight with the 3.3m screen

**C. The acoustic arts**

The room is treated with absorption and diffusion panels for sound management. Dirac Live EQ (featured on the Datasat RS20i processor) is also employed for sonic fine-tuning

**D. Locked up**

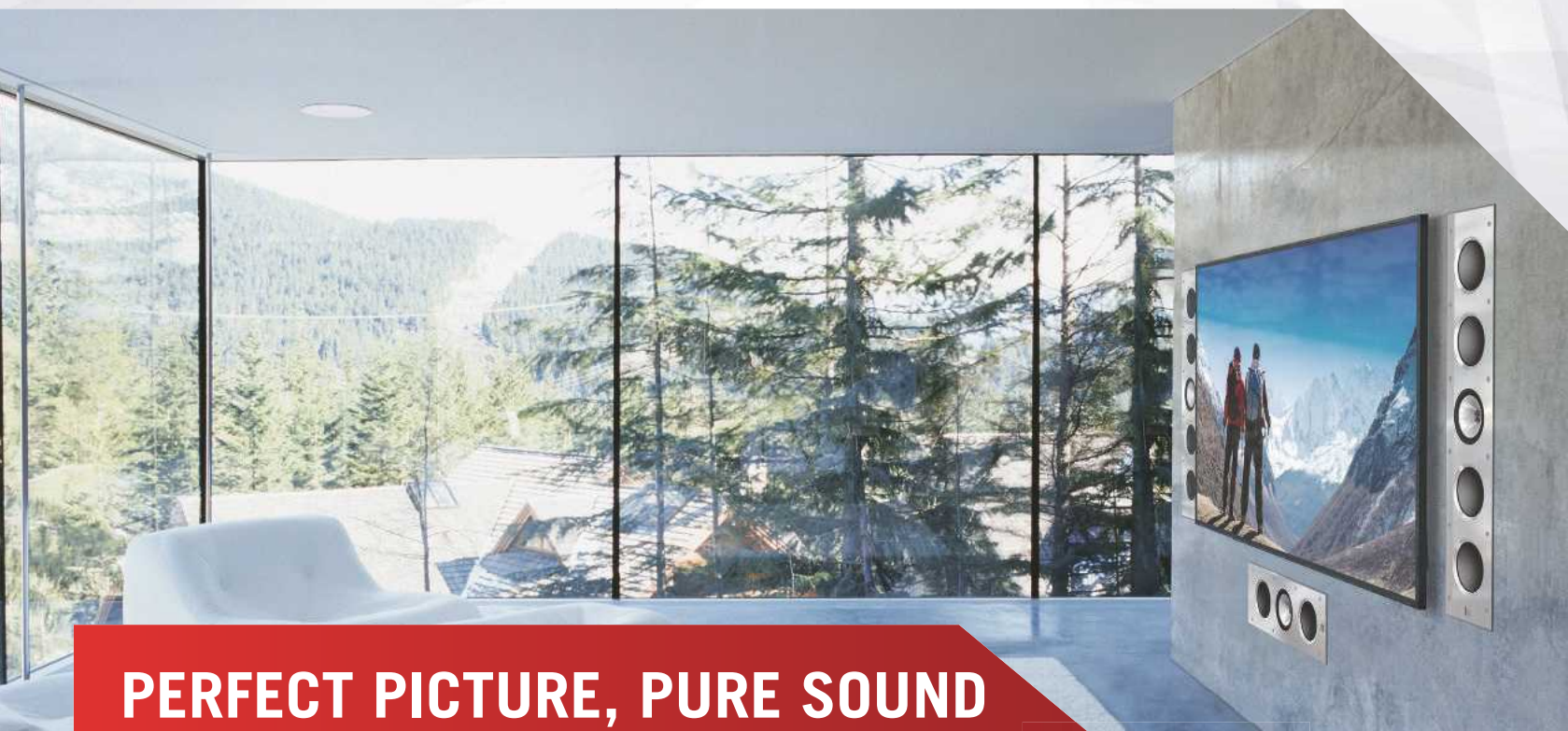
In the kit rack are three Kaleidescape Disc Vaults – each able to store 320 Blu-rays, catalogued for easy browsing

**E. Touch and go**

A Control4 touchscreen controller is always on hand to drive the room's dimmable lighting and AV hardware







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# REVIEWS

→ **HARDWARE** **SAMSUNG** UE55KS9000 Ultra HD Premium TV **DALI** Opticon 5.1 floorstanding speaker system **PANASONIC** 50in mid-range 4K flatscreen **CANTON** DM55 2.1-channel soundbase **SONY** 55in XD93 4K TV **JL AUDIO** Compact cinema subwoofer **DEVOLO** Powerline networking **HITACHI** 49in budget UHD LED **ROUNDUP** Wireless headphones

## Deck of 4K delights



Samsung enters the Ultra HD Blu-ray arena with a slim-line deck sporting an attractive price tag. Is this the player we've all been waiting for? See p52

### HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed



## AV INFO

**PRODUCT:**  
55in 4K TV, Ultra HD  
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**POSITION:**  
Only Samsung's  
not-yet-released  
direct-lit KS9500  
models sit above it

**PEERS:**  
Panasonic  
TX-55DX902;  
Sony KD-55XD9305

**John Archer** discovers Samsung's top-tier TV dazzles with dynamism and clean-cut styling

# HDR taken to the edge

While high dynamic range (HDR) technology isn't completely new, 2016 is the year where the AV industry is getting really serious about it. Amazon and Netflix are unleashing HDR streams, and crucially for *HCC* readers Ultra HD Blu-ray has finally launched, offering a hopefully consistently brilliant way of enjoying the extra brightness range and colour richness that HDR brings to the table.

Where TV hardware is concerned, we're seeing a relative wealth of new sets designed to capitalise on HDR's charms. In fact, we even have a sort of blueprint for what a high-performance HDR TV should look like in the form of the Ultra HD Premium specification recommendations described recently by the AV industry's Ultra HD Alliance (UHDA).

Given that Samsung is a member of the UHDA, and pretty much kickstarted the whole HDR TV scene last year with its debut 'SUHD' models, it's no surprise to find its first TV of 2016, the 55in UE55KS9000, gunning for HDR glory by ticking all the Ultra HD Premium spec boxes. I'll look at what this means in more detail later, but I'll say now that achieving Ultra HD Premium certification from an LED screen using edge rather than direct lighting seems a fairly considerable technical achievement.

## All aboard the next-gen video train

The Samsung's HDR skills are joined by a native 4K resolution (3,840 x 2,160) and up-to-the-minute connectivity including a quartet of HDMI's built to the v2.0a standard. As with previous top-end tellies from the brand, an external connection box (the One Connect Mini) is used to manage inputs. Media file playback comes via USB and DLNA. The TV features dual Freeview HD and satellite tuners.

Ethernet/Wi-Fi options get you access to a prodigious library of online apps and streaming services. Samsung has revamped its sharp-looking Tizen-based smart interface for 2016, with the most significant development being the addition of a second tier of icons on its home screen. These can show links to content related to – or accessed via – the service/feature you've selected on the bottom tier, and the impact this has on streamlining access to content and making the whole

system more intuitive can't be overstated. Content options include (or will, soon) all the key UK catchup TV services, as well as 4K versions of Netflix and Amazon Video. The Amazon Video app also supports HDR streams, though at the time of writing the Netflix app was still waiting for its HDR makeover.

The home for all the TV's envelope-pushing technology is suitably glamorous. Samsung has returned to an ultra-thin frame after its 2015 flirtation with relatively chunky chamfered designs, and the screen is mounted on a very striking 'boomerang' stand that fastens to the centre of the TV's rear via an acutely angled chrome arm. A sliver of chrome extends across the TV's rear from the stand's attachment point, contrasting with a smooth, rivet-free rear panel to give the UE55KS9000 a true 360-degree design. Assuming you care about such stuff.

Samsung's love-in with curved screens continues here, but with the addition of a new 'moth eye' filter that greatly reduces onscreen reflections. Handy, as this has long been the biggest issue for me with curved TVs.

The secondary smart remote that the TV ships with alongside its standard handset has been overhauled, too. It features just a handful of vital buttons and does away with the slightly fiddly point and click option found on last year's model. There's still a small but effective touchpad, surrounded by straightforward up/down/left/right navigation keys.

This new remote can take control of your source equipment thanks to a system that enables the TV to automatically identify the brand and type of pretty much any device you connect to it. Also handy.

Before finding out if the UE55KS9000 delivers on its HDR promise, I should return to its Ultra HD Premium certification. To earn this badge of HDR honour, the screen delivers at least 1,000 nits of peak brightness;

**1. A stripped-back smart zapper is bundled with the standard remote**

**2. Samsung's TV uses a curved quantum dot LCD panel**







**A WAIL  
OF A TIME**  
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cult US drama  
*Banshee* lands  
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uses a 10-bit panel; can reproduce around 96 per cent of the DCI-P3 colour spectrum used in many commercial cinemas; can deliver a black level response of 0.05 nits; and can support the SMPTE ST2084 HDR Electro Optical Transfer Function (EOTF).

What it doesn't do, however, is support the Dolby Vision HDR system. And – cue wails of anguish from a small slice of AV-hedz – it doesn't support 3D either.

To achieve that 96 per cent of the DCI-P3 colour spectrum Samsung has moved back to a proprietary version of quantum dot technology after experimenting in 2015 with a 'nano crystal' variant. In layman's terms. Quantum dot displays work on the principle that different-sized tiny particles can produce different colours, and while quantum dot screens are traditionally more expensive to produce than those which use other systems, they also consistently deliver the widest colour ranges.

### Handsome HDR

The R&D cash that Samsung has invested into making an edge LED TV meet the Ultra HD Premium recommendations pays off handsomely, up to a point. Most obviously, the luminance range the screen can deliver really is immense. With the *Exodus: Gods and Kings* Ultra HD Blu-ray – which contains arguably the most consistently extreme luminance range of any UHD BD

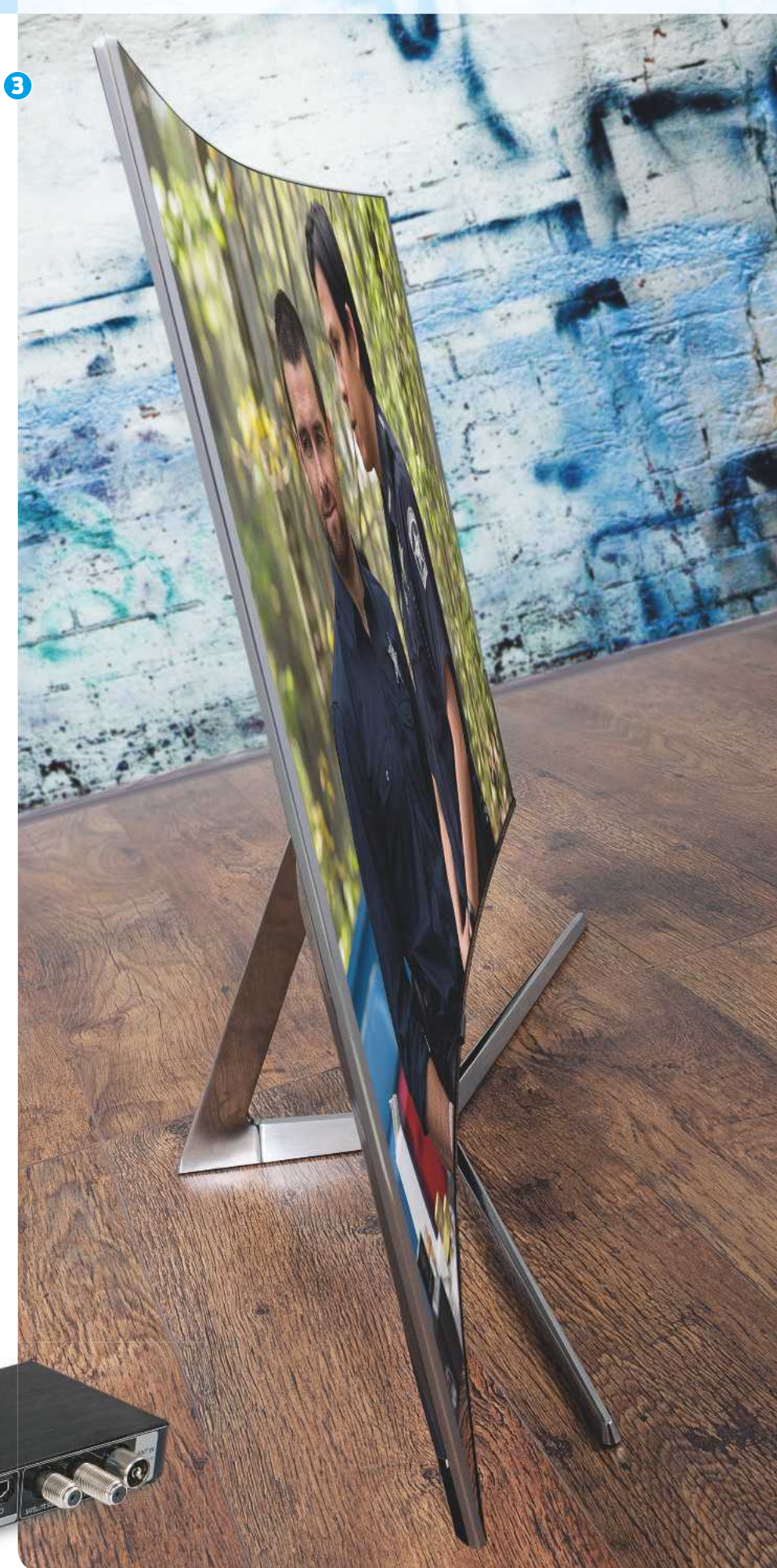
**'The sharp impact of the screen's 4K resolution, coupled with HDR, paints pictures of incredible clarity'**

so far – there are searing, ultra-profound brightness peaks sharing curvy screen space with intense black colours. There's contrast here to lose yourself in.

It's not just in the outliers of its luminance range that the UE55KS9000 excels, though. Samsung has also done a superb job (considering we're still in HDR's early days) of 'filling in' the luminance spaces between image extremes. *Exodus...*'s vistas, such as shots of the priestess surveying the red Nile outside the Pharaoh's palace, mix subtlety and detail with eye-catching vibrancy. It makes for a cracking advertisement of the quality leap over SDR Blu-ray.

Managing to hit peaks of 1,000 nits lets the Samsung avoid issues that I've witnessed with less bright HDR screens, including clipping (lost detail) in very bright areas, and crushing of the tiniest shadow details in very dark areas. And the KS9000 retains light detailing and greyscale information when a relatively dark subject appears against a very bright backdrop, such as when Moses is assaulted by two assassins in the desert in the Ridley Scott epic.

And what of colour performance?  
Well, the quantum dot system





implemented here improves upon last year's Samsung SUHD models when it comes to delivering the wider colour gamuts associated with HDR content. The hues of the royal court's outfits in the *Exodus* on Ultra HD Blu-ray are spectacular, the red of the blood-filled Nile looks dazzling, the blues of Egyptian skies appear deep and rich... in fact, there's scarcely a frame of the movie that doesn't showcase the UE55KS9000's nuanced HDR colour potential.

So this TV proves masterful at handling the light and colour components of HDR sources, and this knocks on, too, into the sharpness of its pictures. We're told that HDR is all about 'making better pixels', and that's the case here. The sharp impact of the screen's native 4K resolution is in full effect, drawing on HDR benefits to paint pictures of often incredible clarity and texture.

## Charge of the light brigade

While the set's HDR pictures often look incredible, there is a catch. During shots containing an extreme mixture of darkness and light – the whole of the sequence in Chapter 7 of *Exodus* where Moses meets with Nun in a torch-lit hut is a good example – I couldn't help but notice vertical bars of light running down the picture around the brightest highlights.

The problem is particularly apparent if you're watching a film that appears with black bars above and below the image, and if you're watching in a darkened room – a situation many of us often find ourselves in.

You can reduce the intensity of this light banding by reducing the UE55KS9000's backlight settings from the defaults the TV selects when it first detects an HDR source. Yet doing so reduces the HDR impact and, crucially, stops the set from matching the 1,000-nit peak luminance level used during the mastering of many Ultra HD discs.

The issue can be made to disappear pretty much completely when you switch to standard dynamic range (SDR) images. This is because you can – and should – reduce the backlight to as low as 30-40 per cent of its maximum value for SDR, at which point you're left with even, stable black levels that are as good as any I've seen from an edge LED TV.

5



## SPECIFICATIONS

**3D:** No **4K:** Yes. 3,840 x 2,160 **HDR:** Yes. UHD Premium **TUNER:** 2 x Freeview HD; 2 x satellite **CONNECTIONS:** 4 x HDMI inputs; 3 x USB; RS-232 port; optical digital audio output; built-in Wi-Fi; Ethernet **SOUND:** 60W (4.1-channel) **BRIGHTNESS (CLAIMED):** 1,000 Nits peak **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,226(w) x 713.2(h) x 52(d)mm **WEIGHT (OFF STAND):** 17.9kg

**FEATURES:** USB multimedia playback; DLNA multimedia playback; automatic learning universal remote; Tizen-based smart interface; HDCP 2.2 on all HDMI inputs; Quantum Dot colour; Precision Black local dimming; Bluetooth headset support; screen mirroring; Game mode; colour management

## PARTNER WITH



**SAMSUNG UBD-K8500:** Get this TV with its aesthetically-matched partner in AV crime. Samsung's first attempt at an Ultra HD Blu-ray player has a slender, curved chassis, intuitive user interface and sells at a tempting £430. See p52 for more.

In other areas, the UE55KS9000 looks routinely excellent with SDR images. Colours enjoy fluid blends, and that pixel-packed detail remains regardless of whether you're watching a native UHD source or (thanks to Samsung's efficient upscaling engine) an HD one. Strangely, I felt more aware with SDR of how well the screen handles motion, making sure that hardly any image clarity is lost during fast-moving sequences. The set ships with stripped down motion-smoothing options, though, offering just an on-or-off Auto mode in addition to user-definable judder and blur menus.

SDR images do seem rather flat after you've viewed HDR, but that's not this screen's fault. And, as your viewing diet will continue to feature a mixture of both formats, it's something you'll have to live with. The SDR performance here is rock-solid for an edge LED screen.

The UE55KS9000 rounds out its mostly impressive performance with a gaming-friendly input lag measurement of just 25ms, and a powerful, well-rounded audio performance that makes the addition of an external sound system much less necessary than I'd expected.

## Serious contender

In the end the UE55KS9000 does a good enough job of showing off 4K HDR's potential to deserve serious consideration, especially with its reasonable £2,100 price taken into account. Gentle overhauls to design and usability are also very successful. But the backlight flaws revealed by HDR content – particularly 'Scope ratio material that's framed by black bars – mean it's not always an unqualified success. And from a technological viewpoint, it raises questions as to whether edge LED TVs will ever handle HDR as effectively as OLED screens or those with direct backlights. A fine TV, but not quite perfect ■

## HCC VERDICT



### Samsung UE55KS9000

→ £2,100 → [www.samsung.co.uk](http://www.samsung.co.uk)

**WE SAY:** Most of the time the UE55KS9000 is a stunning TV, delivering all the thrills UHD and HDR can offer. But the edge LED lighting system isn't foolproof and there's no 3D support

**3. The thin look is back for Samsung in 2016**

**4. The external One Connect Mini box has four HDMI inputs, all HDCP 2.2-enabled**

**5. Additional inputs – Ethernet, USB, CI – are located on the back panel**



Danny Phillips finds both music and movies get love from this DALI set

# Embracing the Dark Side

With its Opticon series, DALI aims to deliver a speaker range accessible to a wide audience, yet without compromising its high-end values. Easier said than done perhaps, but by taking matters into its own hands the Danish brand might have found a winning formula.

**1. Other Opticon finishes available are Black Ash and White Matt Satin**

Crafted at its factory in Denmark from custom parts, the Opticon range is the result of a strict in-house process that allows the company to take control of every aspect of production – a move that DALI believes lets it offer higher-quality designs than you'd normally expect for the money.

This new range is positioned below the larger and more advanced Epicon, Helicon and Rubicon series and comprises seven new models: the compact Opticon 1 and mid-sized Opticon 2 standmounts, the wall-mountable Opticon LCR, the Opticon Vokal centre and three floorstanding options – the Opticon 5, 6 and 8 (in ascending size order).

For the system on test here, I'm using a £1,000 pair of Opticon 6s and the £430 Opticon Vokal at the front, with Opticon 2s on surround duty (£650 per pair). Bass is reinforced by the new £900 SUB K-14 F. It's probably no coincidence that this subwoofer sounds like a deadly Soviet submarine.

## Out with the Ikons

Opticon is the replacement for DALI's Ikon series, but its design is more living-room friendly than its predecessor.

The floorstanding Opticon 6 is a quite glamorous-looking speaker, but the 1m height and considered styling keep it the right side of imposing. A boxy cabinet leaves envelopes un-pushed, but it's as robust and hefty as you'd expect from a set of £1,000 speakers, with internal bracing providing extra rigidity. On the back are chunky gold-plated bi-wirable binding posts, with a heavy power bridge for single wiring.

The entire Opticon range comes in Black Ash, Light Walnut (pictured) or White Matt Satin vinyl finishes. The use of vinyl means that while they all look nice, they feel plasticky to the touch, reducing the sense of luxury slightly. The high-gloss baffle, embellished by sparkling silver trim and a metal panel at the top housing DALI's familiar hybrid tweeter module, impresses more.

### AV INFO


**PRODUCT:**  
5.1-channel floorstanding system

**POSITION:**  
Between the Fazon and Rubicon lines

**PEERS:**  
Q Acoustics Concept 5.1; Acoustic Energy 1-Series







'The floorstanding Opticon 6 is a quite glamorous-looking speaker, just the right side of imposing'



That tweeter module plays host to a 1.1in dome tweeter mounted below a ribbon tweeter, the latter rolling in for high frequencies above 10kHz and reaching up beyond 30kHz, claims DALI. The ribbon resides in its own separate chamber, fitted with rigid bracing, shielding it from the woofers beating below.

The use of a hybrid tweeter system should bring several benefits – wide horizontal dispersion and high-frequency extension above the ear's audible range, mixed with the dome tweeter's ability to produce sounds from 2kHz upwards. It does mean, however, that you need to be careful about placement. Because of the ribbon's wide dispersion, DALI doesn't recommend toeing in the speakers as it could result in an overly bright sound.

The Opticon 6 floorstander also features a pair of 6.5in woofers constructed from a mixture of paper and wood fibre, screwed directly into the 25mm-thick MDF baffle. Behind it, the magnet motor system uses a pole piece made from Soft Magnetic Compound (SMC), a coated magnet granule that can be formed into any shape. SMC, I'm told, boasts high magnetic conductivity and low electrical conductivity – highly desirable properties for a speaker magnet – keeping distortion and colouration at bay. This magnet mashup is used by all models in the Opticon range.

The Vokal centre channel enclosure also uses the hybrid tweeter system, alongside a single 6.5in woofer, while the two-way Opticon 2 sports a dome tweeter and a single 6.5in woofer. Both share the Opticon 6's solid construction. The entire range features a bass reflex system, with rear porting on the Opticon 6 and 2 and a front slot on the Vokal.

As the name implies, the Sub K-14 F uses a sizeable 14in front-firing aluminium long-stroke woofer, driven by a 450W Class D amplifier. It's handsomely styled, but is

**'These combine a superb level of musicality with a barnstorming home cinema performance'**

only available in a White Matt Satin or Black Ash vinyl finish, meaning it looks a little out of place in our array. Again, it has a high-gloss front baffle.

Compact it ain't, but build quality seems fabulous, courtesy of a solid MDF cabinet and sturdy aluminium base. On the back are LFE and phono inputs, plus crossover, phase and volume controls.

The aforementioned Opticon LCR model is designed for cinema rooms where wall-mounted speakers are a must. These feature a 130mm deep cabinet and use a single midbass driver and hybrid tweeter.

### **Awakened by audio**

For sheer sonic thrills, I'm finding it very hard to resist *Star Wars: The Force Awakens'* sublime DTS-HD Master Audio track, and the Opticon system does a credible job of bringing it to life.

DALI's signature sound is one of refinement and detail, and this permeates every scene. As Kylo Ren questions Lor San Tekka during the Jakku village raid in the movie's opening act, the speakers' clarity and impeccable timing adds a 'real world' flavour to effects – torched huts crackle



and pop as if you were stood next to them, while footsteps on the sandy floor have a crunchy texture.

When the action switches to Rey scavenging inside the Star Destroyer, it's a stunning showcase for the DALI's top-end resolution. From the microscopic rustle of dust as she peels back the hatch to the metallic clicks as she rips out parts, it's absolutely breathtaking. And the wide dispersion characteristic of that hybrid tweeter is in evidence, with this top-end clarity maintained over an expanded listening area.

John Williams' refreshed *Star Wars* score seems tailor-made for this system's insightful presentation. The opening fanfare is accompanied by musical elements that I hadn't really considered before, like the tinkling bells and percussion. Brass lines are crisp and punchy, and the system's masterful imaging accurately places musical elements at specific points across the front soundstage, making the beloved composition sound like a live performance.





But such forensic precision isn't limited to the Opticon 6s and their hybrid tweeters. The Opticon 2s ensure a similarly high level of detail in the surround plane, as demonstrated by subtle metallic rattling inside the Millennium Falcon, or the soft hiss of windswept sand on Jakku.

And because they offer excellent bass extension – more so than the smaller £500 per/pair Opticon 1s, which could also be used as a surround speaker option – the Opticon 2s create a deep, atmospheric bed of surround sound, peppered with crisp effects that pan seamlessly. Tonally, all of the speakers sound well-matched, creating a smooth, uniform soundstage.

## Fast and furious

Don't let this system's musicality and sophistication fool you though – it does the rough stuff as well as many other packages around this price. The front trio conveys exploding TIE fighters and roaring Rathtars with vigour. There's bite aplenty, and during frantic sequences with multiple effects, there's a clean, quick nature to the sound. While paper and wood may not sound like the sexiest materials for a speaker driver, DALI's mid/bass units are agile and responsive.

The Opticon array also does scale in its sleep, thanks in no small part to the K-14F subwoofer, which DALI describes as more home cinema-focused than its previous models. The in-built amplifier has suitable power reserves to get its piston woofer going like the clappers, and it easily conveys the enormity of some of *Star Wars*... galactic-scale explosions, sending tremors through the room. I could feel the air flapping.

After a bit of trial and error with placement and volume, the sub melded invisibly into my room, fusing with the other speakers and giving no indication of its position. Its low-frequency output bleeds into everything, lending depth and body to Ren's voice without compromising its intelligibility behind all that apparatus.

And despite its impressive scale and muscularity, the K-14 is relatively quick on its toes. There were moments in the JJ Abrams blockbuster where I was jolted by its ability to slam hard, and quick blaster shots burst tightly with no overhang.

Changing down a fear gears to *Drive* on Blu-ray, the Opticon setup makes short shrift of the movie's subtle soundtrack. It nails the tension of the opening car chase – the throbbing electro bass, the ticking watch and the chunky thud of a police helicopter doing a 360 around the room. Later, as Ryan Gosling rips around the racetrack, the throaty growl of the engine is full and forthright.

I was also impressed by the Vokal's dialogue skills. Gosling's infrequent words come through clearly, with the hybrid tweeters tickling out his vocal nuances.

Despite its talent for home cinema, two-channel music will always be where DALI's heart lies and on that note the Opticon system really excels.

Its treatment of *Breezin'* by George Benson on CD is sublime. The transparency and refinement gives you a faithful reproduction of the signal; DALI doesn't stamp any particular sonic agenda on the sound, other than a slightly embellished top-end that lends air and texture.

Harvey Mason's drums are full and punchy, with hi-hats that tick with nigh-on metronomic precision; when coupled with the lithe, weighty bassline my head wouldn't stop nodding.

## SPECIFICATIONS

### Opticon 6

**DRIVE UNITS:** 1 x 1.1in soft dome tweeter; 1 x 17mm x 45mm ribbon tweeter; 2 x 6.5in paper/wood fibre mid/bass drivers **ENCLOSURE:** Bass reflex **FREQUENCY RESPONSE (CLAIMED):** 49Hz-32kHz **SENSITIVITY (CLAIMED):** 89dB **POWER HANDLING:** 25W-200W **DIMENSIONS:** 195(w) x 1,001(h) x 330(d)mm **WEIGHT:** 18.9kg

### Opticon Vokal

**DRIVE UNITS:** 1 x 1.1in soft dome tweeter; 1 x 17mm x 45mm ribbon tweeter; 1 x 6.5in paper/wood fibre mid/bass driver **ENCLOSURE:** Bass reflex **FREQUENCY RESPONSE (CLAIMED):** 47Hz-32kHz **SENSITIVITY (CLAIMED):** 89.5dB **POWER HANDLING:** 30W-150W **DIMENSIONS:** 435(w) x 201(h) x 312(d)mm **WEIGHT:** 8.8kg

### Opticon 2

**DRIVE UNITS:** 1 x 1.1in soft dome tweeter; 1 x 6.5in paper/wood fibre mid/bass driver **ENCLOSURE:** Bass reflex **FREQUENCY RESPONSE (CLAIMED):** 59Hz-27kHz **SENSITIVITY (CLAIMED):** 87dB **POWER HANDLING:** 30W-150W **DIMENSIONS:** 195(w) x 351(h) x 297(d)mm **WEIGHT:** 7.8kg

### SUB K-14 F (subwoofer)

**DRIVE UNITS:** 1 x 14in aluminium long-stroke bass driver **ENCLOSURE:** Bass reflex (down-ported) **FREQUENCY RESPONSE (CLAIMED):** 29Hz-160Hz **ON BOARD POWER:** 450W Class D amplifier **REMOTE CONTROL:** No **DIMENSIONS:** 396(w) x 429(h) x 428(d)mm **WEIGHT:** 26.4kg **CONNECTIONS:** LFE input; phono input

## PARTNER WITH



**ARCAM AVR550:** This high-spec AV receiver (£2,400) features state-of-the-art HDMI switching, gutsy Class G amplification and carries the Dirac Live EQ suite, meaning it can tune the DALI system's output to work best in your room.

Its handling of the airy flutes and luscious strings is sheer luxury, but the *piece de resistance* is Benson's nimble guitar work, every pluck clean and well defined.

Step up to a higher resolution and the Opticons shine even brighter. A weird Japanese 5.0-channel 96kHz/24-bit DVD-Audio called *Tokachino* by J Project – basically a hi-res easy listening album set to scenic photographs, check it out if you can – sounds absolutely stunning, despite the doctor's waiting room vibe.

Sumptuous top-end detail gives pianos and clarinets a three-dimensional 'in-the-room' presence, while synth and pizzicato strings are warm and immersive.

## Refinement... with muscle

This superb level of musicality, combined with a barnstorming home cinema performance, makes DALI's Opticon system an absolute must-audition if you're shopping at this price point. Few systems mix refinement and muscle this successfully and look so good doing it.

It's beautifully built, gorgeously styled and a treat to listen to ■

## HCC VERDICT



### DALI Opticon 5.1

→ £3,000 → [www.dali-speakers.com/uk](http://www.dali-speakers.com/uk)

**WE SAY:** A classy mid-range proposition from DALI that balances hi-fi sensibilities with the power and snap that home cinema fans crave. Good-looking, too

**2. The Opticon 6 (and Vokal) speakers use DALI's hybrid tweeter arrangement**

**3. The back panel of the subwoofer offers controls for gain, crossover and phase**



## AV INFO

**PRODUCT:**  
4K HDR TV with  
Android smarts

**POSITION:**  
Hero HDR model,  
only outflanked by  
the 75in XD94

**PEERS:**  
Panasonic  
TX-58DX902;  
Samsung 55KS9000

There's a huge shake up in Sony's 4K TV line this year. Some things work, other don't, says **Steve May**

# Sony hopes thin will win

Sony's newly-minted 55XD9305 TV is a flatscreen style icon with some cool new technology, introducing a novel Slim Backlight Drive which effectively divides the panel backlight in two, and sporting a waif-like frame that makes it perfect for wall-hanging. The set reviewed here is a 55-incher, but it's also available in 65-inch guise.

In many ways, the cosmetic design of the XD93 apes what we've seen from OLED. Adding a little flourish is a strip of gold running through the edge of the frame; I like to think of it as apologetic bling.

The central silver-slate pedestal is unpretentious but practical. You'll have no problem sitting this on regular TV furniture. You may have a problem actually assembling it, however – more than a dozen screws are required to get the set safe and sound on its stand, which will be an irritation for anyone eager to get straight in and start viewing. There's also a horseshoe loop in the box, which initially had me scratching my head – until I realised that it was a simplified wall bracket.

The design will raise concerns about the TV's audio performance. And it's fair to say that here speaker punch has been relegated to a back seat. Its sonic performance is functional – my suggestion is to plan on using a separate sound setup.

Connectivity comprises four HDMI's, a Scart and legacy component/composite AV inputs, plus three USBs (one 3.0), Ethernet and optical digital audio output. All HDMI's are HDCP 2.2-enabled – this is a huge bonus now that sources that work to the encryption standard are coming out of the AV closet. The set is 3D capable, too. However, with no 3D glasses supplied in the box, this functionality went untested.

While greatest interest will undoubtedly focus on this set's picture quality, one less glamorous aspect needs addressing with a stern face. The remote control intro'd here is a thing of horror. TV manufacturers have long been determined to reinvent the humble zapper – witness the blight of touchpad controllers we've had to endure over the recent years. Now Sony offers new misery. The remote with this telly features rubberised bumps and ridges, feels cheap in hand and is a 'mare to navigate with, not least because you really have no sense of where your thumb is.

On the plus side, we do get a built-in microphone, so you can curse and have your expletives searched.

The TV boasts two satellite tuners (not Freesat) and dual Freeview. There's no Freeview Play support, but Sony does offer a YouView interface, which replaces the default Freeview programme guide. This has the welcome benefit of integrating catchup media players for iPlayer, ITV Hub, All 4 and Demand 5. Of course, for the most part you'll be living within the Android TV environment.

Apps are many and varied. There's both Netflix and Amazon Instant Video, which are 4K-enabled, as well as VOD service Wuaki.tv, YouTube, Dailymotion, the BBC's sport and news apps, and more besides in the Google Play and Opera stores.

The Android platform is the antithesis of LG's webOS or Panasonic's Firefox. While rivals are stripped back and minimalist, Google presents cluttered shelves. To help simplify basic navigation, there's an Action Menu on the remote which jumps directly to the various sound and vision menus. Sony also offers a Content bar which allows you to access curated content.

## Badges, we don't need no...

Sony has chosen not to use Ultra HD Premium certification on any of its HDR screens this year, citing its own wider marketing initiative for 4K as the reason. However, the brand maintains the XD93 would pass muster if submitted. I'll take that with a pinch of salt. Laced up to a UHD deck, this set has nothing like the dynamics of the UHD Alliance-branded Panasonic DX902.

That's undoubtedly because it's edge-lit. To improve contrast, the new Slim Backlight Drive uses two LED light modules paired with dual light guides which split screen coverage 50/50. The technique allows the set to effectively switch off illumination to one half of the screen, while backlighting objects in the other, thereby boosting >

1. You can stream content direct to the TV via GoogleCast

2. Sony's 4K thinscreen uses an edge LED array





**WHAT A CARRÉ ON**  
 Spy series *The Night Manager* checks in on Blu-ray p97





## SPECIFICATIONS

**3D:** Yes. Active shutter (but no glasses supplied) **4K:** Yes. 3,840 x 2,160  
**HDR:** Yes **TUNER:** 2 x Freeview HD; 2 x satellite **CONNECTIONS:** 4 x HDMI inputs; Scart; composite/component video; digital optical output; Ethernet; 3 x USB; built-in Wi-Fi **SOUND:** 4 x 7.5W **BRIGHTNESS (CLAIMED):** N/A **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,239(w) x 717(h) x 36(d)mm **WEIGHT (OFF STAND):** 22kg

**FEATURES:** USB multimedia playback; 4K X-Reality Pro image engine; Advanced Contrast Enhancer; Motionflow XR 1000Hz; Triluminos WCG colour; Wi-Fi Direct; screen mirroring; dual-band Wi-Fi; GoogleCast; Android smart TV; YouView

## PARTNER WITH



**SONY HT-CT380:** Give Sony's thinscreen a sonic leg up with the addition of one of the brand's own soundbars. The £200 HT-CT380 and forthcoming CT390 are sleek, HDMI-connected designs with separate subwoofers.

While the backlight arrangement can be a little temperamental, I found with a combination of Black Adjust, Auto Local Dimming and X-Tended Dynamic Range, it's possible to engineer a really cinematic black without much in the way of crushed detail. Napoleon Solo's escape from East Berlin (*The Man from UNCLE*, Blu-ray) through dark, partially-lit cobbled streets, is deeply atmospheric, and even with non-HDR sources, the panel's inherently bright delivery produces some great headlight highlights.

The TV does confound, though. Normally I'd advise any ambient light sensor to be turned off, but the XD93 consistently looked better in my low-lit room with its light sensor on. With the sensor off, it tends to emphasise grain and colour noise: *Jessica Jones* (Netflix 4K) looks splotchy with livid red speckles. The light sensor is on by default with HDR content, and can't be turned off.

Motion handling remains a Sony strength, although buyers should choose carefully from the many options here. The Smooth setting is an invitation to motion artefacts, lack of retained detail and a yucky sheen. It's better to opt for Clear; although this darkens down the image, pans are smooth. For movie content, True Cinema is free of artefacts and looks pleasingly filmic.

## Beautiful but flawed

The XD93 is an innovative, intriguing screen. The application of the Slim Backlight Drive is ingenious, and allows the set to shine cosmetically. Yet while HDR material catches the eye, the TV doesn't match a full array backlight model for intensity or precision. And I still harbour reservations about the Android UI, which is at times exasperating, and the remote control is a horror. That all said, if you're after a beautifully designed UHD TV with 4K streaming support, the XD93 is one to consider ■

## HCC VERDICT



**Sony KD-55XD9305**

→ £2,000 → [www.sony.co.uk](http://www.sony.co.uk)

**WE SAY:** This ultra-slim HDR set offers a compelling 4K performance, but Sony's new Slim Backlight Drive doesn't necessarily dazzle and usability could be better

contrast. For most content this appears to work okay. However, there is often an unusual milky luminosity to scenes with swathes of black that's hardly appealing.

Picture presets are extensive, and include Standard, Vivid, Cinema Pro, Cinema Home, Sports and Game. Depending on your source, you also get an HDR Video option. You can apply the latter setting to Full HD Blu-ray, and the set interpolates a greater colour volume, but it's not recommended if retaining director's intent is your aim. For regular BD content, the Standard setting gives a good

**'If you're after a beautifully designed Ultra HD TV, then Sony's 55XD9305 is one to consider'**

overall balance combining pleasing colour with solid depth and brightness. This wide gamut panel does a particularly nice, rich red, and there's a real snap to the image, delivered via Sony's X-tended Dynamic Range PRO toolkit.

This Sony does a convincing job upscaling HD, too. As was the case in previous ranges, the brand's multi-talented X1 processor shows a steady hand when it comes to crafting additional detail without over-stressing matters.

Native 4K image quality is reassuringly good. *Marco Polo* on Netflix is a decent benchmark for 2,160p clarity, and HDR compatibility here celebrates the use of lighting on the show to ramp up textures and nuance. With HDR Blu-ray, things get even more involving. *San Andreas* is a typically extreme example of first-gen UHD disc mastering, and boasts a surfeit of bright peak highlights. Sony's new backlight tech doesn't have the intensity of a direct LED system, but it'll still make you momentarily wince.

When an HDR source is recognised, the screen goes into auto HDR Video mode, boosting brightness and contrast. This is particularly noticeable on Netflix, actually. The standard black backdrop of the streaming service is reassuringly dark, but opt to watch HDR content and the set automatically jumps into HDR mode, causing the backlight to leap in intensity. Stop watching and brightness visibly flits back to normal.

**3. The TV's bezel is adorned with a sliver of gold trim**



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## AV INFO

**PRODUCT:**  
Ultra HD Blu-ray  
player

**POSITION:**  
The only UHD BD  
deck Samsung has  
released so far

**PEERS:**  
Panasonic  
DMP-UB900

1. The player uses a  
gently curved chassis

2. The remote is very  
good – responsive and  
easy to master

Samsung's debut 4K deck feels competitively priced. But is that all it's got going for it? **John Archer** finds out

# Ultra HD Blu for the masses

The first Ultra HD Blu-ray player to find its way onto our test bench, Panasonic's excellent DMP-UB900, is a hard act to follow. But Samsung's UBD-K8500 makes a case for itself right from the off thanks to the £430 price – a saving of £170 over its rival. Is there a hidden cost behind this up-front saving?



The K8500 is not, it must be said, as well built as the Panasonic UB900. A reasonably tasteful brushed finish and curved front edge (that follows Samsung's penchant for curved TVs) can't hide the fact that the deck features a pretty lightweight build quality. And the disc tray and front USB port fit rather awkwardly into the front edge, especially as the USB port is covered by an ugly rubber bung.

The player's more value-oriented approach is also apparent with its connections. The Samsung deck doesn't feature analogue multichannel audio outputs. All you get are two HDMI (one for sending video/audio to your TV, one for shipping audio only to an AV receiver), an optical audio output, and an Ethernet port as a wired alternative to the deck's built-in Wi-Fi. This shows a more pragmatic, less quality-obsessed approach to audio on Samsung's part, driven – actually quite sensibly, it seems to me – by a desire to keep the cost of entry to the Ultra HD Blu-ray world low.

The USB port can be used for playing back photo, music and video multimedia files from USB sticks. Perhaps unexpectedly, you can also use the K8500 to rip CDs to USB drives.

There's no playback support for legacy DVD-Audio or SACD discs, but high-res audio formats, including FLAC and ALAC, are catered for, although unlike the Panasonic UB900, the DSD format is not welcome.



As you might expect from the K8500's network connectivity, it supports DLNA streaming and online smart TV features. The latter options aren't as comprehensive as those of Samsung's TVs, but do include 4K Netflix and Amazon apps, as well as YouTube.

As I was completing my review of the K8500 it emerged that it had joined the Panasonic UB900 in achieving the Ultra HD Premium certification recently announced for Ultra HD Blu-ray players. What this certification actually means for disc spinners is a little unclear, but presumably it's a good thing...

The K8500 doesn't join its pricier rival in securing THX certification, but this isn't a surprise given that Samsung has never worked with THX.

One final spec sheet note: the K8500 doesn't support the Dolby Vision HDR format – it's HDR 10 only. But as there are currently no Dolby Vision discs around, that's not a calamity.

### Mainstream maestro

Judging the K8500 with a library of Ultra HD Blu-ray discs, it performs better than might have been expected for the first 'mainstream' player of the next-gen format.

Delivering the full-fat experience of 4K and HDR into Samsung's UE55KS9000 (see p40) reveals that sense of 'wow' noted in our previous review of the Panasonic





UB900. During the Times Square fight in *The Amazing Spider-Man 2*, for instance, there's clearly more detail in close-ups of the actor's faces, Spidey's costume, and the big city backdrop than you get viewing the same scene with the standard Blu-ray.

There's a greater sense of depth, too, partly as a result of the enhanced definition, but also because of a clear increase in the dynamic range of this contrast-rich and colourful sequence. The K8500 is clearly adept at delivering both the subtle lighting 'layers' associated with quality HDR content as well as its explosive brightness and darkness extremes.

The player also does a good job of passing the wide colour gamuts associated with UHD BDs to compatible screens (I also tested it with a Sony XD93). A scrap between Spider-Man and Electro at a power station towards the film's end sees truly gorgeous hues in Spider-Man's richly red/blue outfit and Electro's eerie glow – tones that leave standard dynamic range video looking short of *joie de vivre*. Even better, the K8500 also pipes HDR colours without any banding issues or imbalances (as long as you've got your TV's HDMI inputs set correctly to handle Ultra HD Blu-ray's colour space). The only banding I saw was in the skies above Mars in *The Martian*, but these were visible on the UB900 too, and so are likely an issue with the disc encode.

## 'The Samsung UBD-K8500 serves up an enjoyable Ultra HD Blu-ray performance without breaking the bank'

More subtly coloured scenes in the *Spider-Man* flick, such as those between Peter and his mum in his bedroom, also show HDR contributing more precision even to gentle flesh tones and neutrally-lit interiors.

Attaching the K8500 to a legacy 4K TV that doesn't support HDR reveals a solid HDR to SDR conversion process. Pictures are natural and clean, and you still get a palpable sense of the 4K aspect of UHD BD even without HDR's extra luminance and colour in play.

Onboard upscaling for Blu-rays – and even DVDs – to 4K works well. Detail and texture is heightened without noticeably exaggerating any source noise.

At this point I need to point out that while the K8500 fares better with its pictures than might have been expected for its money and the newness of the UHD BD format, it also falls short of the Panasonic UB900. Running the Times Square *Amazing Spider-Man 2* sequence through both players in 4K HDR finds the Panasonic delivering slightly more dynamic colours than the K8500, and slightly more detail in areas like skin, the texture of Spider-Man's outfit and background police cars. They're not major differences, perhaps, but they're palpable with

### SPECIFICATIONS

**ULTRA HD:** Yes **UPSCALING:** Yes. From SD and HD to 2,160p **MULTIREGION:** No. Region B BD/R2 DVD (but Ultra HD discs are region-free) **HDMI:** 2 x outputs (1 x A/V, 1 x audio only) **MULTICHANNEL ANALOGUE OUTPUT:** No **DIGITAL AUDIO OUTPUT:** 1 x optical output **ETHERNET:** Yes **BUILT IN Wi-Fi:** Yes **SACD/DVD-A:** No/No **DIMENSIONS:** 406(w) x 44.7(h) x 230(d)mm **WEIGHT:** 1.9kg

**FEATURES:** HDR to SDR downscaling; selectable resolution output; hi-res audio file support includes FLAC and ALAC; UHD Premium certified; smart features including Netflix and Amazon 4K video-on-demand; CD ripping to USB; DLNA and USB file playback; preset image modes

### PARTNER WITH



**AMAZON VIDEO:** Samsung's deck has a 4K-enabled client for Amazon's VOD service, which is available with an Amazon Prime membership (£79). The platform offers a mixture of exclusive TV content and (mainly) back-catalogue movies.

real content under normal viewing conditions. Using my legacy, non-HDR 4K TV also reveals a touch more detail visible in the image's dark and light extremes on the pricier Panasonic rival.

There are four picture settings accessed via the Tools button on the remote (but not the main Settings menu...) These are Standard, Movie, Dynamic and User. The latter allows you to play with sharpness, brightness, etc, sliders. Movie is the suggested mode for unadulterated payout.

The K8500's audio is perfectly adequate. As it should, it'll happily disgorge lossless audio bitstreams (including Dolby Atmos/DTS:X mixes). But with no analogue output onboard it's not going to tempt audiophiles to part with their high-spec CD player.

### Choose your 4K weapon

The initial choice facing 4K Blu-ray fans is almost clear-cut, and comes down to budget. Panasonic's UB900 is a more rewarding player, not only in AV terms but also build quality and feature set. Yet Samsung's model undercuts it in price – considerably so – and still delivers the picture impact that early adopters will crave. In other words, if you've got the cash – and especially if you're looking for a deck with musical leanings – consider the UB900. Otherwise, rest assured that the Samsung serves up an enjoyable UHD BD performance without breaking the bank ■

### HCC VERDICT



#### Samsung UBD-K8500

→ £430 → [www.samsung.co.uk](http://www.samsung.co.uk)

**WE SAY:** While the K8500 doesn't eke out quite as much of Ultra HD Blu-ray's glorious quality as its only current rival, it's the sort of good-value option the new UHD disc format needs



**3.** The twin HDMI's are useful for those with AVRs that don't support 4K/HDCP 2.2 passthrough

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**REY OF  
LIGHT**

The *Star Wars* saga steps up a gear – Blu-ray review p98





**John Archer** discovers if a mid-range Panasonic TV can satiate his HDR desires

# Meet the 4K middle man

While Panasonic's flagship screens – the DX902 models and its curved CZ952 OLED in particular – garner the brand its most loving looks, it's never been afraid to aim its sights a little lower and cater for those on more everyday budgets. Here in the shape of the TX-50DX750, we have a 50in 4K HDR TV retailing for a reasonable £1,300. Neither a cheapie nor a top-tier option, it's a set that will no doubt be on a lot of people's shortlists.

My immediate question is: can such an affordable set do HDR proud? The early signs aren't entirely promising. Unlike the DX902, this screen fails to meet the criteria to wear an Ultra HD Premium badge. In brightness terms, it falls well short of the 1,000 nits required. Nor does its colour performance cover 90 per cent of the DCI-P3 colour range. The 50DX750's 8-bit LCD panel isn't up to UHD Premium's 10-bit demands, either.

What impact these limitations might have on its Ultra HD Blu-ray performance I'll get to later; first there are other features to highlight – starting with the set's design. The 50DX750 looks elegant in its slender silvery way, and offers a degree of customisation. Adjustable desktop legs can be mounted with either their curved or angled sides facing forwards, and positioned either towards the centre of the screen or at its corners. This means you get a choice of four different stand options. It's a very clever piece of product design.

Connectivity is decent. Of the set's four HDMI's, two support the HDCP 2.2 anti-piracy protocols and 4K/HDR streams at up to 60fps. There's a trio of USB inputs for playing multimedia from thumb-drives or recording from the built-in tuner. Also, of course, the 50DX750 carries Wi-Fi and Ethernet network options supporting home media streaming and smart TV fun. The latter includes access to the latest versions of Amazon and Netflix's video streaming apps, complete with support for their 4K and HDR streams.

Catchup TV, meanwhile, is handled by the TV's support of Freeview Play. Here, you can access shows you've missed on the main UK terrestrial TV channels via programme listings that scroll backwards seven days.

The 50DX750's many content options are marshalled by Panasonic's superb Firefox-based smart TV interface. This remains one of the most attractive, logical and personalisable smart hubs around.

## The Master at work

For images, the 50DX750 carries the brand's new 'Studio Master HCX' video processing engine (but not the HCX+ version). This takes on special importance here given the challenges involved with 'down-mapping' HDR's colour and brightness information/values to the screen's specifications.

Compared with more high-end HDR TVs I've seen this year so far, there's no doubt that this screen's HDR pictures don't hit quite the same heights. At the same time, though, it does a better job than might have been expected.

For starters, you do get a sense of HDR's greater dynamics. In the stunning Ultra HD Blu-ray transfer of *The Revenant* (US import – we'll be reviewing the UK disc next issue) there are numerous bright highlights that impress. When Glass is finally found by his ex-trapper colleagues, the torches glowing against the night sky appear with markedly more intensity than they do in SDR.

Black levels look slightly deeper in *The Revenant*'s night-time scenes too, but more important than that is the way the 50DX750's video processing retains a surprising amount of greyscale and shadow detail subtlety in dark areas. Shadow detail is one of the first things that usually goes AWOL when HDR's luminance range is remapped to relatively limited brightness screens.

## AV INFO

**PRODUCT:**  
50in 4K TV with HDR playback

**POSITION:**  
In the middle of Panasonic's 2016 4K TV lineup

**PEERS:**  
Samsung UE49KS8000;  
Sony KD-49X8505C

1. Panasonic's 50-incher adds 3D playback to its 4K bow

2. The TV ships with a standard IR handset







## SPECIFICATIONS

**3D:** Yes. Active **4K:** Yes. 3,840 x 2,160 **HDR:** Yes. HDR 10 **TUNER:** Yes. Freeview HD **CONNECTIONS:** 4 x HDMI inputs; headphone jack; optical digital audio output; 3 x USBs; Ethernet port; integrated Wi-Fi **SOUND:** 20W **BRIGHTNESS (CLAIMED):** N/A **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,115(w) x 647(h) x 40(d)mm **WEIGHT (OFF STAND):** 16kg

**FEATURES:** Studio Master HCX processing engine; HDR remapping; edge LED lighting with local dimming; Freeview Play built in; Firefox smart TV system (My Home Screen 2.0); 4K/HDR Netflix/Amazon support; 1800Hz BMR IFC; quad core processor; HDCP 2.2 support on two HDMI inputs

## PARTNER WITH



**THE REVENANT:** The Oscar-winning revenge drama starring Leonardo DiCaprio is out to buy on a good-looking Ultra HD Blu-ray in the UK from June 6, but can already be imported (region-free) from the US

3

Occasionally, shots of Glass standing foregrounded against a very bright backdrop can see him start to look like a dark silhouette rather than a fully realised part of the image – but these instances are rarer than expected.

With HDR colour, the 50DX750 doesn't proffer the same richness of tone as Samsung's KS9000 (reviewed on p40) or Panasonic's own DX902. The blue skies and beautiful sunsets that emerge above *The Revenant's* wilderness, or the flames of the film's fires, don't carry that same level of impact and colour depth. There's more potential for gentle colour banding in skin tones and skies, too. Yet everything still looks more richly coloured than the 1080p BD version.

## 'A likeable mid-range 4K TV from Panasonic – its SDR pictures are regularly a thing of beauty'

HDR viewing also exposes a significant weakness, and one similar to the issue I have with Samsung's KS9000 rival. During extremely contrast-rich scenes (the torchlit search for Glass in the dark is a fine example) there were obvious vertical bands of light running down the image around its brightest parts. Once again, the blame can be laid at the edge LED lighting array.

This sometimes really distracting issue can be countered by turning off the set's local dimming option, but then its black levels become so grey that they're more annoying than the occasional 'light bar'.

The issue is less obvious if what you're viewing doesn't feature black bars above and below the image.

Getting back to the good news, the brightness, contrast and colour-boosting technologies Panasonic has introduced for HDR work wonders on standard dynamic range images. Black levels with the Blu-ray version of *The Revenant* look quite beautiful – largely free of greyness if you employ the local dimming system, yet also still full of depth and variance. Colours are crammed with subtle blends, helping visuals retain a naturalistic feel. Knock the set's backlight setting down to below its 50 per cent mark (something you can't do with HDR without reducing the

accuracy of the screen's HDR remapping) and dark sequences appear free of the backlight banding and other clouding issues evident if you leave it too high.

The DX750 features strong detailing with native 4K footage and refined HD upscaling. In fact, its performance with SDR footage (which most of us will still be watching for much of the time, especially when it comes to broadcast TV) is genuinely excellent. My only gripe is a little image softness when showing rapid motion. As usual, Panasonic's Intelligent Frame Creation feature is an option to improve motion clarity.

The TV's 3D performance, meanwhile, is fair to middling. The brightness and colour response is strong, and the panel's impressive contrast helps create a tangible, enjoyable sense of space and depth. However, there's enough crosstalk around to take the edge off the 3D image's sharpness and make long-term stereoscopic viewing quite fatiguing.

Pictures are accompanied by a 20W speaker system that manages to make dialogue credible and clear, and adds a palpable sense of space to *The Revenant's* epic landscapes. There's even a reasonable amount of controlled, distortion-free bass.

## Outnumbered

Panasonic's 50DX750 is overall a pretty likeable mid-range 4K TV. Its SDR pictures are regularly a thing of beauty, the smart features are excellent, and its good HDR moments far outnumber its bad ones. Yes, it doesn't deliver the full glories of the new dynamic video format – and as with other TVs this year has issues keeping its backlight in check – but it's priced accordingly. And what may stand most in its favour is its 50in panel size. Not everyone has room in their life for a 4K megascreen. This will find plenty of admirers ■

## HCC VERDICT



### Panasonic TX-50DX750

→ £1,300 → [www.panasonic.co.uk](http://www.panasonic.co.uk)

**WE SAY:** This TV looks great with SDR content, has a fab smart TV engine, and can be considered decent with HDR when you take its relatively low price into account

**3. The TV's twin feet can be mounted in four different ways**

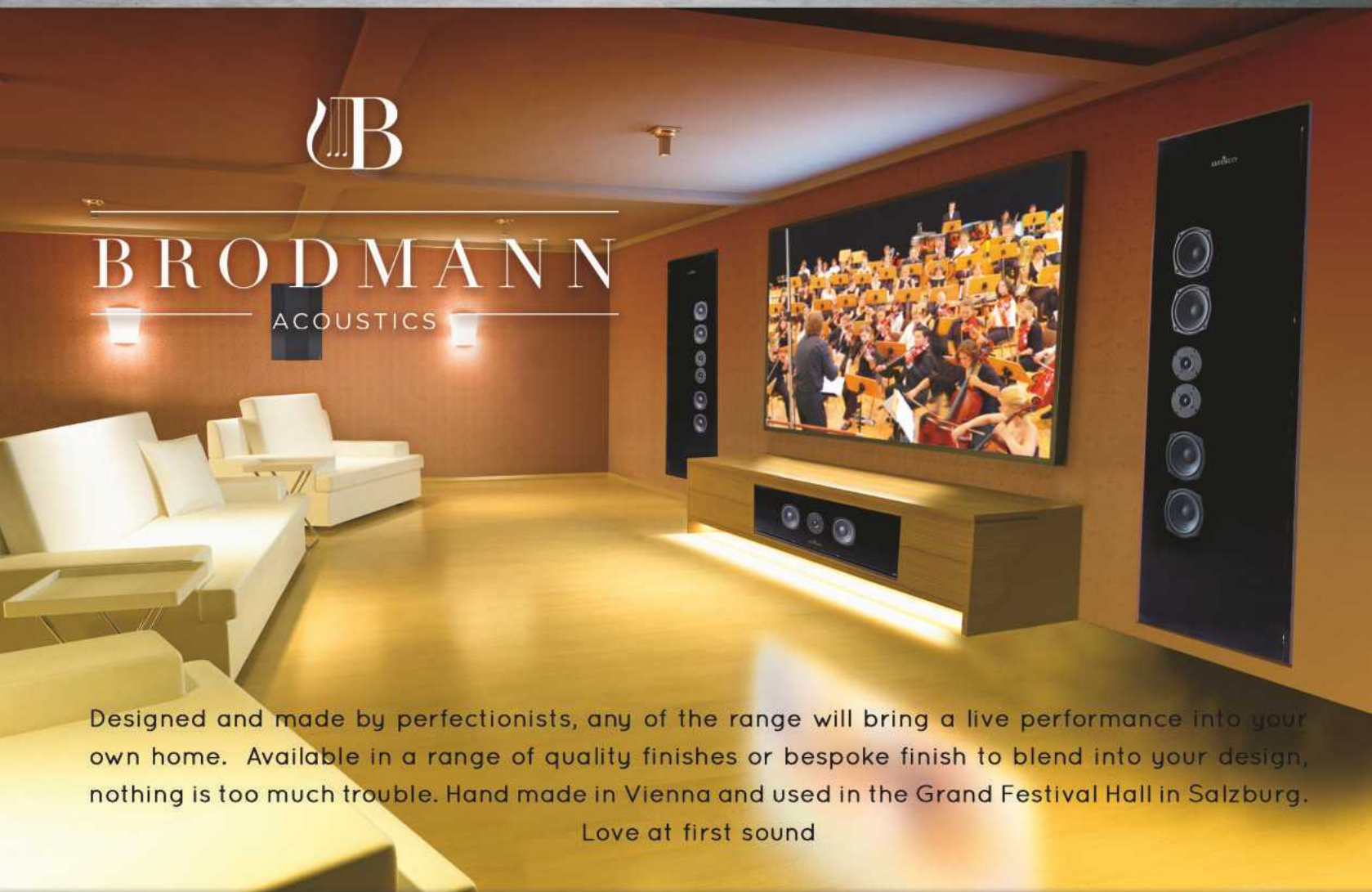
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# Back to base

**Danny Phillips** considers HDMI a frippery when faced with the performance prowess of Canton's premium DM55 soundbase speaker



The soundbase uses six drivers in a 2.1 configuration

**THE CANTON DM55** soundbase replaces the terrific DM50, offering some new features and upgraded audio. It's the smallest of three models from the German brand, alongside the DM75 and DM100, which are both designed for bigger rooms and TVs.

The DM55 isn't exactly cheap – these days there are soundbase speakers around for less than £100. But the price is reflected in its opulent construction. Available in black, silver or white, the robust cabinet is topped by a thick slab of glass, providing a solid platform for screens up to 40kg in weight. The front-facing aluminium mesh and thick feet add to the DM55's premium feel. A three-digit LED display is succinct but clear.

The sense of luxury continues on the inside. The DM55 uses six drivers – two tweeters, two midrange and two subwoofers, size unspecified – which is a more sophisticated

configuration than most soundbases. They're driven by a 200W amplifier.

If the DM55 has an Achilles' heel, it's socketry. There are no HDMI ports, just optical, coaxial and analogue phono inputs. You can't, therefore, employ the Canton as an HDMI switcher. That said, it

does make setup cleaner and less complex – most will route to a TV's optical output.

Built-in aptX Bluetooth gives the DM55 a second life as a wireless music speaker, and a new Select feature automatically switches the soundbase into Bluetooth mode when you hit play on a paired device. Other fresh features include a dialogue-boosting Voice mode and a Hotel option that sets a maximum volume limit – useful if you're re-homed to a travel tavern.

As with the DM50 you can choose from three EQ settings for under-TV, freestanding or rack placement, while IR learning keeps your existing TV zapper in gainful employment. If you have to use the supplied remote, its chunky build and logical button layout make operation a pleasure.

## Falling in love

In terms of performance the DM55 delivers an even more exciting and focused sound than the DM50.

What I love about Canton's soundbases is their ability to combine huge sonics with the refinement and expressiveness of decent-quality separates, and it's the case here – when I fired up *Star Wars: The Force Awakens* on Blu-ray, the results were spectacular. John Williams' iconic fanfare is crisp and dazzling, projected with great purpose. Skip to any of the film's thrilling action scenes and the roaring spaceships, crackling lightsabers and explosions shoot

## SPECIFICATIONS

**DRIVE UNITS:** 2 x tweeters; 2 x midrange; 2 x subwoofers

**AMPLIFICATION:** 200W

**CONNECTIONS:** 1 x optical audio input; 1 x coaxial audio input; stereo analogue phono input; 1 x subwoofer output

**DOLBY TRUEHD/DTS-HD MA:** No/No

**SEPARATE SUB:** No

**REMOTE CONTROL:** Yes

**DIMENSIONS:** 545(w) x 69(h) x 300(d)mm

**WEIGHT:** 5.3kg

**FEATURES:** Stereo and DTS TruSurround modes; Voice mode; Hotel mode; Eco mode; aptX Bluetooth; Bluetooth Select; lip sync adjustment; IR learning feature

into the room with bite and punch. As the movie rattles along at breakneck speed, so does the Canton. Its natural agility and attack keeps you immersed and entertained.

It's articulate too, picking out the texture of each character's voice, human or otherwise. Such intelligibility is helped by Voice mode, which subtly but effectively enhances the midrange.

The DM55 also displays treble finesse, teasing out effects noises like the rustle of sand as BB-8 rolls along. Other 'bases can reproduce these sounds but not with the clarity and precision of the Canton.

The whole thing is held together by the DM55's excellent bass output. There's a subwoofer pre-out if you have a spare woofer to call into action, but left on its own and the twin in-built drivers prove deep and potent, giving bass-rich moments ample scale and weight without overpowering the other speakers. The thud and hum of lightsabers in a forest clash is tight and beefy, and when the final act plays host to some truly destructive sequences this 2.1-channel soundbase has the presence to match.

There are two listening modes, Stereo and Surround. The latter certainly widens the soundstage and makes Blu-ray soundtracks a touch more immersive. I found Stereo a better choice for TV and music, though, with its clear, focused presentation.

Whichever mode you use, the Canton's sound will enhance your enjoyment no end. The DM55 manages to improve upon the performance of its forebear, chucks in a couple of useful new features and looks and feels like a serious slab of AV gear. At this price it's one of the best options around. Buy with confidence ■

## HCC VERDICT



### Canton DM55

→ £330 → [www.cantondm.co.uk](http://www.cantondm.co.uk)

**WE SAY:** The DM55 throws down a refined sound with loads of detail and powerful bass. More than good enough to overlook the HDMI shortfall

## AV INFO

**PRODUCT:** 2.1-channel soundbase speaker

**POSITION:** Canton's entry-level soundbase. DM75 and DM100 are larger models

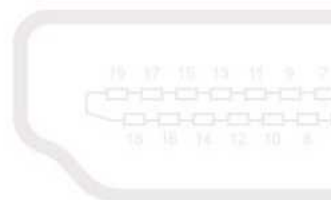
**PEERS:** Cambridge Audio TV5; Sony HT-XT3



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# Barking mad

This well-designed smallscale subwoofer startles bass fiend **Adam Rayner** with its ability to track low-end effects without ever losing control



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## JL AUDIO STRADDLES

both the AV and car audio markets, delivering deep bass thrills to those who seek them. On the home cinema side it is best known for its premium-priced, insanely potent Gotham and Fathom subwoofers. This offering, new to the UK and debuted at the Bristol Show, is the company's idea of an entry-level product, and is called Dominion.

The £900 d108 is a sealed box of just 1.3 litres. It uses a single 8in woofer and a 500W RMS amplifier. The slightly bigger Dominion, the d110, has a 10in driver and a more punchy 750W power plant, and costs £200 more.

As well as high-level speaker wire connections via a neat quick-release plug system, the Dominion d108 has twin phono sockets and can

be fed in LFE or stereo. There's also an Ethernet socket, used for connection of the receiver box of JL Audio's new JLink system. This £235 accessory comes with a 2.4GHz wireless transmitter that hooks into your source gear. Up to three extra receivers can be used (£135

each), to feed more subwoofers.

I connected the transmitter/receiver system and after a little time setting up the woofer, played some music before spinning *Inside Out* by Pixar. The back panel of the sub is interesting: there's a polarity flip switch (and an input ground lift switch, incidentally, to avoid any earth buzzes) but there's also

a continuous-sweep phase control, zero to 280 degrees. You can take this as an indicator of JL Audio's affinity with bass.

The 8in driver has a very big top roll surround, with a bigger roll-diameter than found on most 15in drivers. Inside, a bevy of patented parts reside to allow a stupefyingly long throw – up to 2.5in, suggests JL Audio. Along with the iron grip of an amp with a closely regulated power supply, it makes for bizarrely impactful bass from a small woofer.

## Luscious LFE

The d108 purred, growled and held luscious notes underneath my resident system of large B&W tower speakers and a centre speaker weighing thrice what this woofer does.

The Pixar 'toon starts very gently inside a newborn's head. We're given exposition about how memories are kept. And when a memory is stored, this plot-vital concept is accompanied by a rich, heavy, bass throb. Just so you don't miss it. And it was here that I realised JL Audio's tiny box has an identity crisis. It's like a Chihuahua that barks like a Great Dane. The d108 captured the depth and absurd weight of the effect, its relatively small driver aided by that massive excursion and firm suspension. Set deep into the front baffle behind a grille intended to be left in place, it shifts air with relish.

Without spoilers: Sadness and Joy accidentally get sucked up a big pipe. Another

## SPECIFICATIONS

**DRIVER:** 1 x 8in long-excursion woofer

**ENCLOSURE:** Sealed

**FREQUENCY RESPONSE:** 31Hz-112Hz (+/-1.5dB); -3dB at 29Hz and 119Hz

**ONBOARD POWER:** 500W RMS Class D amp

**REMOTE CONTROL:** No

**DIMENSIONS:** 254(w) x 289(h) x 336(d)mm (including feet and rear fins)

**WEIGHT:** 12kg

**CONNECTIONS:** High-level speaker inputs (stereo or mono); phono inputs (stereo or mono); Wireless Link Port for use with optional JLink TRX system (rated at up to 30m)



important soundtrack moment with a large, taut 'thwobb' effect that drops deep. The d108 simply delivered all this, with no evidence of its small size, and without a shrug. Even when our protagonist gets in trouble, Islands Of Personality crashing into the abyss, the room-shaking tones got played with clean, full-bodied aplomb.

Furthermore, Jangles the clown, asleep and snoring behind the doors of subconscious, presents a brooding LFE effect that goes almost to subsonics. This proved a test of the d108's bass extension. It's rated at 29Hz at -3dB, but JL Audio also claims a 21Hz response at -10dB, which is entirely believable. And higher up the frequency band, this woofer relished the rambling basslines of the jazzy end credits music.

So in addition to its pretty looks and capable controls, the Dominion d108 sub is astonishingly good in output. Played unseen, I might have thought it was subwoofer with a 12in driver and a solid amp.

It's certainly not cheap, but is very good indeed. Perfect for when space is tight ■

## AV INFO

**PRODUCT:** 8in sealed subwoofer compatible with optional wireless transmission system

**POSITION:** JL Audio's entry-level, despite the price tag

**PEERS:** Velodyne MicroVee; Artison Nano I

## HCC VERDICT

★★★★★

**JL Audio Dominion d108**

→ £900 → [www.av-techsolutions.co.uk](http://www.av-techsolutions.co.uk)

**WE SAY:** Significantly more money than some 8in subwoofers around, but the Dominion offers an output that belies its size, with superb control

# Mains-stream

**Martin Pipe** gives mains wiring another use – extending his Wi-Fi range and watching movies in the attic



## SPECIFICATIONS

**CONNECTIONS:** 2 x Fast Ethernet (dLAN 550 duo+); 1 x 100Mbps Fast Ethernet, 802.11b.g.n 2.4GHz Wi-Fi (dLAN 550 Wi-Fi)

**DATA RATE (CLAIMED):** Ethernet 10/100 Mbps; Powerline 200/500Mbps; Wi-Fi 300Mbps

**WI-FI RANGE (CLAIMED):** 300m max

**FEATURES:** 400m maximum powerline range; mains link and Wi-Fi LEDs (can be turned off); 128-bit AES encryption for mains link; WPA/WPA2/WPS Wi-Fi security; 'pass through' mains socket; free Cockpit management/monitoring software

You can add additional 550 Wi-Fi powerline adaptors for £60 each



**SO, THE ROOM** in which you need Wi-Fi is just out of router coverage, and the only means of facilitating a sporadic connection is to operate your device in an amusingly-awkward position. Or maybe you'd like to use a smart TV or BD player in a room that lacks a network connection. Here's a hassle-free solution.

Devolo's dLAN 550 Wi-Fi employs an evolving technology, known as powerline networking, to convey data at high speed across your home's internal mains wiring.

Although powerline-ready routers are available, they're not typically provided by ISPs. And, to the best of my knowledge, manufacturers haven't started building powerline networking into home entertainment gear. Until this sort of thing becomes more established, you'll need products like the 550 Wi-Fi.

This starter kit consists of two boxes. The larger one, the dLAN 550 duo+, plugs into the mains outlet nearest your router.

It resembles an oversized three-pin mains plug, with a 'replacement' mains outlet, and Ethernet connectivity to shuffle data in and out. A supplied Ethernet cable links it to a spare port on your router. If there isn't one (most ISP routers only offer four) then whatever you

disconnect can be plugged into a second port on the dLAN 550 duo+.

The smaller dLAN 550 Wi-Fi plugs into the wall outlet nearest to where network connectivity is required. Like the other box, it has been designed to minimise the risk of fouling adjacent mains plugs. No replacement mains socket here, but you do get a Wi-Fi access point – albeit one that only works on 2.4GHz. This is the best-supported Wi-Fi band, but also the most crowded. There is nevertheless potential for filling in patchy coverage – and you can also use Ethernet, as there's a socket integrated into the housing.

Next, you have to pair the two units – buttons on each facilitate this, together with LEDs to confirm status. Using Ethernet, the link should behave just like a direct router connection. And Wi-Fi? You'll need to log into your new access point using the passkey printed under the dLAN 550 Wi-Fi's plug pins. This, and the access point name, can be changed with the free Cockpit software, which also allows you to change other settings (like extinguishing those LEDs, if they distract), or monitor connections.

## Taking media for a walk

The system worked well, despite being plugged into outlets spaced 20m apart. Such distances could be of practical value if you want connectivity in a garage or loft media room (the only proviso is that they're on the same mains phase – as they will almost certainly be in a domestic environment). I used it with a number of devices, ranging from a

netbook to a Cambridge Audio streamer. With the latter, internet radio stations and music stored on a NAS were reliably conveyed. I was also able to view Blu-ray rips in all their hi-def glory with no interruptions.

Devolo's throughput claims are, however, rather optimistic. Using test files stored on a NAS, I measured an average Ethernet speed of 65Mbps (against 107Mbps direct). And the Wi-Fi performance fell short of my (Virgin Superhub) router's, the figures being 16Mbps and 27Mbps respectively. Such real-world data rates should suffice for video playback, though. I was also able to pair a couple of Devolo products already in my possession to create a larger mains network.

Powerline networking devices of other brands should also be suitable – these Devolos support standards like HomePlug and IEEE 1901 – but there might be performance penalties if you're trying to use older units.

In all, a goody – but I'll end with a warning to hi-fi enthusiasts. Power your equipment via filtered sockets and distribution boards capable of rejecting this mains-borne data, or it might intrude on your music as a nasty rasping 'hash'! ■

## AV INFO

**PRODUCT:** Powerline networking system with Wi-Fi access

**POSITION:** Middle 'starter kit' of Devolo's range

**PEERS:** TP-Link TL-WPA8630P KIT; Netgear PowerLINE

## HCC VERDICT



**Devolo dLAN 550 Wi-Fi Starter Kit**  
→ £100 → [www.devolo.co.uk](http://www.devolo.co.uk)

**WE SAY:** Easy to install with a practical design and reliable in use, yet potential speeds are compromised by 100Mbps Ethernet maximum





### BACK IN THE RING

Rocky trains his protégé in boxing drama *Creed* on Blu-ray p96

# Hitachi's 4K revival

The familiar Hitachi brand is back in the TV business, and this time it's all about budget Ultra HD. **Steve May** heads down to Argos with a monkey in his pocket

**IT'S BEEN A** while since we've had a Hitachi branded TV in HCC. The company was a major force in television back in the day, but rather quietly disappeared from view after pulling the plug on its plasma adventure. Thankfully it's now making a return, albeit at the cheapie end of the market. Bargain-hunters will find this budget UHD screen at Argos, priced at just £500 (if not considerably less). There's also a step-down 43in version.

Design-wise, this 49-incher is smart enough if not remarkably thin. The panel has a slim black bezel, while the frame is garnished with a chrome wraparound. The TV sits on two plastic feet, positioned towards its edges. A large, curved IR remote is supplied. Even before the telly is powered up, this doofer reveals the manufacturer to be Euro OEM giant Vestel.

Connections are, perhaps surprisingly, very good. There are four HDMI's, all of which are HDCP 2.2-enabled, so you'll be able to hook up as many UHD sources as you can find. There are also three USB's, plus component and composite inputs (with Scart supported via an adaptor), and PC VGA.

As you might imagine, setup is quick and uncomplicated. Perhaps the first thing to do once connected and tuned is to hightail it to the Picture settings and disable the Energy Saving mode. If activated, it drains brightness and contrast from the image like a leaky sieve. Frankly, if you're that worried about the environment just don't buy a TV. This eco setting is little more than self flagellation.

The main menu is a vertical bar divided into Picture, Sound, Settings, Installation, Channel List and Media Browser tabs. In addition to contrast, brightness, colour and sharpness, there's a Dynamic Contrast adjustment, should you want to add bite to the image.

A Q Menu provides a shortcut to picture settings. Presets include Normal, Sports, Dynamic and Cinema.

The screen sports a standard Freeview HD tuner – there's no YouView or Freeview Play trickery here. Note that the EPG blocks out the image and mutes live audio.

### Mediocre media mogul

Hit the Media Browser button and the Hitachi takes you to connected video, photo and music content. Performance

#### AV INFO

**PRODUCT:**  
Entry-level 4K Ultra HD LED TV

**POSITION:**  
There are 50in and 55in Hitachi sets, but these are Full HD

**PEERS:**  
Hisense 50K321;  
Philips 40PUT6400

here is not the slickest. The set found my TwonkyMedia and Plex media players but playback compatibility wasn't great – it cocked a snook at my MKV and AVI clips, which actually left me with little to watch. Thankfully, playback from a connected USB stick is better. Here the 49HGT69U proved able to play MKV, MOV, MPEG and WMV files. Audio formats supported include MP3, WMA and AAC.

Streaming services are delivered via the SmartVue platform. This is a basic portal for key apps and space-fillers. It's home to BBC iPlayer, Netflix and YouTube, as well as the BBC News and Sports apps, Flickr, Viewster and iConcerts. There are also clients for Twitter and Facebook, casual games and some Euro-centric streaming services. If you want full catchup you'll need to add an external box.

We know that Vestel is introducing the Android TV platform some time this year. It's something of a shame this set doesn't support it.

You can also access YouTube or Netflix directly from the remote handset. 4K streams on Netflix are offered, which is a bonus.

## Prepare to play with presets

Image quality, Energy Saving mode notwithstanding, is rather good, although the set has some foibles. The aforementioned presets are all over the place. Counter intuitively, the Natural mode is flatter than the Cinema mode, while Game and Dynamic both offer greater colour saturation with more realistic skin tones than either.

All the presets are essentially versions of the same filter. I was stunned to find that the most consistently pleasing was actually Dynamic – and with Dynamic Contrast called into play but dialled back to Min. This isn't a particularly bright display, so Dynamic doesn't wield the kind of intensity you might expect the setting to offer. The set isn't HDR-capable, but that won't come as a shock given the price.

Screen uniformity for this edge-lit panel isn't bad – the relatively small screen size is clearly beneficial. However, it does tend to get a little splashy around the screen's edges when viewing predominantly dark scenes.

The Hitachi looks best with 2,160p content. Itsy-bitsy detail isn't lost on this panel size, although the temptation is to probably view closer than you might normally.

## SPECIFICATIONS

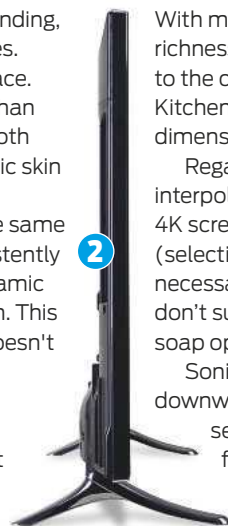
**3D:** No **4K:** Yes, 3,840 x 2,160 **HDR:** No **TUNER:** 1 x Freeview HD **CONNECTIONS:** 4 x HDMI inputs; PC VGA; component video/composite video (Scart via adaptor); optical digital audio output; headphone output; Ethernet; built-in Wi-Fi **SOUND:** 2 x 10W **BRIGHTNESS (CLAIMED):** 350 nit **CONTRAST RATIO (CLAIMED):** 1,200:1 **DIMENSIONS (OFF STAND):** 1,100(w) x 635(h) x 70(d)mm **WEIGHT (OFF STAND):** 13.9kg

**FEATURES:** Dual-band Wi-Fi; USB multimedia playback; DTS TruSurround HD audio; SmartVue portal including BBC iPlayer, BBC News, BBC Sports, YouTube and Netflix (4K) apps; DLNA multimedia playback; Energy Saving mode; picture preset modes

## PARTNER WITH



**NOW TV:** The Hitachi is a little light when it comes to video-on-demand. The £15 Now TV box brings catchup apps from the four main UK terrestrial channels, plus subscription access to movies, sports and entertainment fare.



With my current diet of 4K Netflix, there's a splendid richness to the imagery of *Marco Polo* that would do justice to the court of Kublai Khan, while the gritty detail of Hell's Kitchen gives Marvel's *Jessica Jones* almost three-dimensional depth.

Regarding motion, there are no additional image interpolation or smoothing modes offered. A no-frills 50Hz 4K screen, this panel doesn't hold fine detail in motion (selecting Sports won't make any difference). This isn't necessarily a bad thing, though, because it means images don't suffer from undue artefacts and there's no slippery soap opera-style processing to contend with either.

Sonically, there's nothing amiss. The set has a downward-firing stereo sound system (with tweakable settings in the User menu) that's perfectly decent for everyday viewing. Adding appreciable depth to the audio is a DTS TruSurround mode, which isn't surround, of course, but it does bring some welcome weight to proceedings.

## Affordable 4K

Overall, Hitachi's 49HGT69U should be considered a good-value budget offering that doesn't get much wrong.

You wouldn't expect the latest top-spec toys here, and you don't get them. The smart portal is utilitarian but at least 4K Netflix is served. There's no 3D support, but these days you don't get that on displays costing four times as much.

What's key is that the native Ultra HD performance is suitably sharp, and this pixel density serves regular Blu-ray well. A good option for a low-cost home cinema ■

**1.** The 49HGT69U uses a 3,840 x 2,160 panel, but doesn't support HDR content

**2.** The Hitachi's twin feet add more depth to a TV that isn't super-thin

**3.** Apps in the SmartVue platform include 4K Netflix



## HCC VERDICT



### Hitachi 49HGT69U

→ £500 → [www.hitachidigitalmedia.com](http://www.hitachidigitalmedia.com)

**WE SAY:** This inexpensive Euro-made flatscreen is a solid option if you're looking for 4K clarity without HDR, and can live without the latest smart toys





## Just a few of our recent accolades



Best Home Cinema Over £100k **Highly Commended** 2013  
 Best Home Cinema £40k-100k **Highly Commended** 2015  
 Best Home Cinema under £40,000 **Winner** 2011, 2015



Best Home Cinema **Winner** 2014  
 Most Professional AV Rack **Winner** 2014  
 Dealer of the Year **Winner** 2014  
 Best Lighting Project **Winner** 2015



Best Home Cinema **Winner** 2015  
 Most Outstanding Entry Winner's **Winner** 2015



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# Accessorize me!

## Wireless headphones

When it comes to headphones, many of us want to lose the wires but not the quality.

**Ed Selley** rounds up a quartet of the latest Bluetooth cans for your consideration

**THERE WAS A** time when choosing a pair of wireless headphones came with some unavoidable consequences. You would have to add some form of base station to your equipment to transmit the signal, and even though some of these were large and ungainly, the signal that the headphones themselves received was subject to dropouts and interference. Unless you really needed the range, it was better to stick with a long cable and be done with it.

In recent years, however, Bluetooth technology has come to the rescue and eliminated some of those issues. While early versions of the standard were a little limited, current models offer the ability

to listen to a CD-sized file without compression and at ranges of up to ten metres with no need for a base station or other attendant hardware.

And with many of the latest crop of soundbars, soundbases, TVs and some AV

'Bluetooth has come to the rescue of wireless headphones – now it's a case of pair up and go'

receivers able to transmit sources via Bluetooth, they are beginning to appeal to film fans fed up with trailing a headphone cable across the viewing room carpet. Now it's simply a case of pair up and go.

For this test, a quartet from Bowers & Wilkins, JBL, Sennheiser and Sony – ranging in price from £200 to £330 – were connected to a Lenovo T530 ThinkPad using a Sennheiser BT-D 500 USB aptX dongle. Looking for a varied range of sources, they were fed our Ultraviolet copy of *Edge of Tomorrow*, a few episodes of *Masterchef* on iPlayer (because we were hungry) and a FLAC version of Josefin Öhrn + the Liberation's album *Horse Dance* ■

**WWW.BOWERS-WILKINS.CO.UK/£330**

## Bowers & Wilkins P5 Wireless

Blessed with sumptuous design and build, these bring a touch of luxury to your listening

**THE BOWERS & Wilkins P5 Wireless** are the most expensive headphones here and also the smallest on test, but I'd suggest you can get an idea of where the £330 asking price has gone. These are an evolution of the original P5s, employing the same precision-engineered suspended 40mm drivers and tuned by the audio boffins responsible for the brand's high-end 800 Series speakers. There's a lushness about the build and design, too, with high-quality materials used, and a nice carry case thrown in for good measure. It's as refined as you'd expect from B&W.

Wireless capability comes via aptX-capable Bluetooth (a cable is also supplied for wired use). Supplying the juice is a rechargeable lithium battery (via a microUSB input) to give a useful 17 hours of claimed



battery life. Pairing is simple once you realise that the sliding power control presses down to pair, something which took me a while to figure out. Reasonably lightweight at 213g and featuring good padding, the P5s are also pretty comfortable.

### Big ideas

In use, these headphones manage to avoid sounding smaller than their roundup rivals. The initial beach invasion sequence in *Edge of Tomorrow* is handled with assurance and a convincing spread of effects, Mimic's scuttling across the stereo soundfield. Dialogue is easy to follow and while bass isn't

seismic, it has enough heft to be believable. With TV shows and music material, the P5s are arguably stronger still. There's still a lack of absolute low-end power but bass is smoothly presented and well integrated. And, overall, there's an abundance of clarity without distortion. As such, everything is easy to follow and sounds luxuriant at the same time. With music in particular, the Bowers & Wilkins pair turns in a performance that is good full stop rather than simply good for a wireless design.

There are more ballistic models here in terms of movie viewing and the price tag is considerable, but given that the P5s work equally well on the move as they do on the sofa, it's hard not to be swayed by them. A class act all-round.

**HCC VERDICT**



**Bowers & Wilkins P5 Wireless**  
→ £330 → [www.bowers-wilkins.co.uk](http://www.bowers-wilkins.co.uk)

# JBL Everest Elite 700

The company known for monster speakers makes tricked-out headphones, too

**IF YOU JUDGE** products on how many widgets they have, the JBLs will be a shoo-in for your top spot. As well as the Bluetooth functionality that I'm focusing on here, the Everest Elite 700s are the only model to offer active noise cancelling, which can be applied in three different levels depending on the amount of outside noise you want to allow in. There's even a free app to let you fiddle with noise cancelling and EQ, and a reasonable carry case is supplied.

The headphones are constructed around a pair of 40mm drivers, placed in housings sufficiently large as to completely enclose your ear. The padding is a little on the soft side but the JBLs are still comfortable enough.



Appearance-wise, the all-black wrap of my review sample is a bit dour, but there's an argument that headphones can look like anything at all as you'll never see them when wearing them. And they're also available in an all-white finish.

Build quality seems good and thanks to voice prompts during pairing the Everest Elite 700s are also easy to get synced to your devices.

This helps *Edge of Tomorrow* have some impressive bass weight to it. Explosions are delivered with force and the performance is largescale and exciting. Dialogue, however, isn't as well-projected in the mix, although it generally remains easy to follow.

The Everests brings a level of bass to *Masterchef* that the programme might not always realistically have but the top end is smooth enough and sufficiently detailed.

With *Horse Dance* I found the cans sounded fractionally sluggish in the lower registers, but the tonality was excellent and there was no trace of harshness or aggression to it.

Music might be the weaker area, then, but for film and TV use, these JBLs are a decent option.

## Mountains of bass

In keeping with a few products from the brand, the Everest Elite 700s sound big and powerful.

**HCC VERDICT**



**JBL Everest Elite 700**

→ £250 → [uk.jbl.com](http://uk.jbl.com)

EN-UK.SENNHEISER.COM/£200

# Sennheiser Urbanite XL Wireless

While there's a hint of bling about these 'phones, don't let that put you off

**THE SENNHEISERS ARE** perhaps the most overtly 'styled' of the models auditioned, but the design is subtle enough not to rule out its use by anyone over the age of 25. There are some nice features too – the sliding adjustment for the earpads works well and the Urbanites are extremely comfortable to wear for extended periods, courtesy of super-soft but snug-fitting ear pads. The supplied carry bag is lightweight, but better than nothing, I suppose.

With full aptX support and a fairly hefty pair of drivers (although Sennheiser keeps the dimensions under wraps), the Urbanites are competitive with more expensive models here. Pairing is impressively quick, aided by voice confirmation of what you are doing. A trick here is a touch-sensitive pad on the side of the right earcup. Swiping and tapping can be used to control track selection/volume etc. It takes a while to get used to, but you can choose not to employ it.

## Upping the low-end level

Compared to some more transparent Sennheiser models, it doesn't take long to realise that the presentation of the Urbanites has been tinkered with in keeping with the external design. There is plenty of bass extension with the Tom Cruise sci-fi. Thankfully, it doesn't feel overblown and the sense of scale that the Urbanites elicit is the best of the group.

With TV, the same scale, space and separation is useful at keeping everything intelligible. Again, low frequencies are well presented, yet with my frothy electro pop FLAC files, this extra low-end does catch up with the Sennheisers slightly – basslines, in comparison with the B&W pair, lack a smidgeon of speed and articulation.

The performance is still highly positive, though, and given the relatively low asking price and superb comfort, the Urbanites make for an easy recommendation.



**HCC VERDICT**



**Sennheiser Urbanite XL Wireless**

→ £200 → [en-uk.sennheiser.com](http://en-uk.sennheiser.com)



# Sony MDR-1ABT

Not really designed to be taken out and about, but these are worthy of a place in your movie den

**THE MORE COSTLY** of two full-size Bluetooth headphones from Sony, the MDR-1ABTs look and feel like domestic, rather than on-the-move, models. The design is generally large and while the pads fold flat, the chassis itself remains fairly bulky. Further evidence of the stay-at-home nature of the MDR-1ABTs is that they are not supplied with a carry case.

Yet what you lose on one hand you gain with another, as the decoding of the MDR-1ABTs is fitted with touch-to-pair NFC Bluetooth that I found comfortably the best system here. aptX is supported (plus Sony's LDAC tech with compatible sources, placing them under the brand's



Hi-Res Audio banner) and the 40mm drivers are placed in large, comfortable enclosures. Don them and you feel ready for business. There are excellent touch controls on the outer pad. A black finish is available as well as the silver shown here, and the build generally feels worthy of the asking price, despite the use of plastic rather than metal for some elements.

## Fun, fun, fun

The performance that these 'phones put in with *Edge of Tomorrow* is deeply delightful. There is little in the way of extraneous noise and like the Bowers &

Wilkins P5s, the MDR-1ABTs feel very even and cohesive from top to bottom. And unlike the P5s, these have enough bass to sound big, lively and, above all, fun. The presentation is undoubtedly the most cinematic of the models here.

Neither are they a one-trick pony. My diet of on-demand TV benefits from the even and refined performance through the frequency range, and dialogue is clean and distinct. The MDR-1ABTs rounds off a strong showing with a delivery of music that is lively, packed with detail but still refined enough not to sound bright or harsh.

This isn't the prettiest pair of headphones around, but there's no denying their aptitude for movies, TV and more ■

## HCC VERDICT



### Sony MDR-1ABT

→ £300 → [www.sony.co.uk](http://www.sony.co.uk)

## Final standings

**ANY DOUBTS THAT** Bluetooth technology might not be up to the task of powering a pair of wireless home headphones are effectively put to bed by this foursome. All of them do a fine job at making movies sound convincing and entertaining, so we are left with the business of separating the great from the good.

In this instance, for different reasons, the JBL and Bowers & Wilkins models have to be content with merely being very good. The former offers useful noise-cancelling features and app integration but can sound a little muddled, while the latter has a sparkling, musical performance and excellent design and build, yet feels pricey in this company.

Separating the Sennheiser Urbanite XL Wireless and Sony MDR-1ABTs is harder. Both have excellent Bluetooth implementations and are comfortable to wear for long periods.

The Sennheisers sell for around £100 less than their challenger, which makes them an

absolute steal considering how well they fare in performance terms, but even allowing for the price difference, the MDR-1ABTs take the top spot. This is an absolutely brilliant offering that just happens to feature an easily established wireless connection. If you want to cut the cord, these are the ones to beat ■

**Wireless wonders: Sony's MDR-1ABT**



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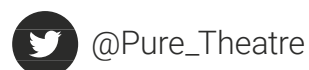
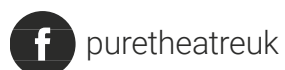
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**THREE  
PAIRS  
UP FOR  
GRABS!**

# **WIN:** Q Acoustics Q-BT3 Bluetooth speakers

**THIS ISSUE WE'VE** teamed up with British loudspeaker specialist Q Acoustics to give away three pairs of its Q-BT3 Bluetooth speakers. Previous winners of an *HCC* Best Buy badge, these smart-looking stereo enclosures make for a fine music playback system and provide a flexible, potent alternative to a soundbar. Enter our competition to be in with a chance of adding a pair to your setup.

## **Trooping the colour of quality audio**

Available in red, white or black finishes (and if you win you'll get to choose your flavour) the Q-BT3 marries design style with high-quality performance – 'this isn't a jazzed-up iPod dock,' says the manufacturer. A 2 x 50W power amplifier (in the right-hand speaker) provides ample grunt to drive each cabinet's 4in paper cone midbass unit and 1in silk dome tweeter. Wired connectivity runs to an optical digital audio input ideal for hooking up to a TV, plus stereo phono and 3.5mm analogue inputs for additional sources. For wireless fans, the

integrated aptX Bluetooth receiver enables music streaming from compatible phones, tablets and laptops/PCs, while movie lovers who wish to augment the soundstage with a dollop of extra bass can use the Q-BT3's subwoofer output to connect to a woofer of their choice. A clutter-free remote control is supplied for slick operation.

And how do these speakers sound? In a word, superb. We found they impressed with whatever source material, bringing clarity and body to TV dialogue, punch and dynamism to Blu-ray movie soundtracks and smooth control to our music library. Overall, the Q-BT3 makes an excellent sonic upgrade for a TV, doubling up brilliantly for stereo music.

The speakers are available to buy now priced at around £280. If you fancy grabbing a pair, answer the brain-teaser opposite before the closing date. And good luck! ■

**For more info on Q Acoustics' range of home cinema and hi-fi speakers visit**  
[www.qacoustics.co.uk](http://www.qacoustics.co.uk)



Q Acoustics' Q-BT3 speakers are available in white, black and red finishes

## Be in with a chance of winning the Q-BT3 speakers by answering the following film-related question:

**Q: 1980s helicopter thriller *Blue Thunder* starred which *Jaws* actor?**

**A) RICHARD DREYFUSS B) ROY SCHEIDER C) ROBERT SHAW**

### HOW TO ENTER:

**SIMPLY EMAIL YOUR** answer (either A, B or C) to [competitions@homecinemachoice.com](mailto:competitions@homecinemachoice.com) with the subject line 'BT3'. You must include your name, address and contact telephone number so we can notify you if you win.

**THE CLOSING DATE** for this competition is June 16, 2016. Please read the terms and conditions (opposite) before sending in your entry.

### Competition rules

**1.** The first entries drawn at random will win the prizes. **2.** Only one entry per person/household; multiple entries will be discarded. **3.** Entrants from the UK only. **4.** Employees of MyTimeMedia Ltd and companies supplying competition prizes are not eligible to enter this competition. **5.** Please ensure your personal details are correct, as they will be used to contact you if you win. **6.** No alternatives, cash or otherwise, will be offered to the winners as prizes. **7.** The editor's decision is final. **8.** Comp winners' info available upon request. **9.** The closing date for entries is June 16, 2016.



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# Digital Copy

All-in-one home cinema systems used to fly off the shelves. These days the category seems to be nearly dead. **Mark Craven** hopes this means 5.1 mixes on TV shows aren't in peril

**HOME CINEMA USED** to be oh-so simple. Partner a bigscreen TV with a home theatre in a box (HTIB) and you were sorted for whatever DVD or Blu-ray you wanted to play. You could go the separates route, splitting your speakers, AV amp and disc-player purchases in pursuit of greater quality, but an all-in-one system couldn't be criticised when it came to covering the basics. It was wonderfully democratic.

In 2016 the landscape has changed considerably. Soundbars and soundbases are in. All-in-one systems are out. Well, almost. Check out the likes of Currys and Argos and you'll find 5.1 and some 7.1 packages from Sony, Panasonic, Samsung, LG, Bose *et al* clamouring for your quids. People must still be buying them, but industry figures reveal not in their droves.

Nor are most of the ones being sold hot off the factory line. This year's CES was all about HDR TVs, wearable tech and smart fridges. What it wasn't about was one-box systems featuring multiple speakers and spring-clip terminals. If, for instance, Samsung is planning to launch a new range of HTIBs, then it hasn't mentioned it. This year could be the one where the category is left to flounder.

Soundbars and soundbases can be excellent. They can offer tasty dynamics, crisp highs and expressive mids, and with a side-dish of beefy bass. And there's plenty of variety in terms of style, price and feature sets. Yet what they don't offer – despite their best efforts – is authentic, genuine, discrete multichannel audio. Or built-in disc playback, for that matter. So if you want *bona fide* home cinema now, you have to assemble a setup from separates. As a reader writes in our letters pages this issue, you are being 'forced.' I wouldn't quibble with that.

This change in the AV market raises an interesting question. Namely: how long will home media support 5.1 mixes? Could we one day be declaring multichannel home cinema audio as dead as a Betamax deck and wiping a tear from our eye?

I, of course, hope not. And it seems a strange thing to consider at a time when studios are pushing ahead with fanciful object-based mixes for their blockbuster titles, and regularly including them on their BD releases. For the home cinema enthusiast, things have never been so exciting. Yet **the fall from favour of the all-in-one system means that 5.1 is a long way from an everyday proposition**, and if the man or woman on the street is 10 times more likely to lace up their flatscreen TV to a two-channel soundbar than a budget 5.1 system, then it becomes easier to see why broadcasters seem loathe to invest much effort into 5.1 mixes for TV material. You can imagine the discussion during production: 'Well, we can make a 5.1 mix, but who's going to listen to it?'

So what's the path for the future in the sub £600 category? Well, I could lurk outside retailers and tell the AV curious that it's easily possible to pick up an AVR, BD deck and 5.1 speaker set for that money, and to hell with the wires. But a better use of my time would be to point them in the direction of products like Philips' Fidelio B5 and Sony's HT-RT5 (pictured), which combine a soundbar and subwoofer with wireless rear speakers. No integrated BD deck, but everyone watches Netflix these days anyway...

This is budget home cinema reinvented for the 2010s. And it's probably as close to the HTIB glory days as we're going to get. They may not be 'real home cinema', but I'm all in favour ■

*Do you always listen to 5.1 audio when it's featured on a TV show? Let us know: email letters@homecinemachoice.com*

**Mark Craven** knows from experience that it's easy to set up an HTIB, but getting it all back in the box again is a different matter entirely







# Film Fanatic

Prince was one of the most talented musicians of his generation, but also leaves behind an oft-overlooked cinematic sideline. **Anton van Beek** investigates...

**AS YOU GET** older, there's a certain expectation that the famous people you grew up admiring will pass away during your lifetime. Even so, 2016 has proven to be a particularly dark time.

The roster of talent that we've lost across the first four months of the year is too great to list in full, but includes the likes of David Bowie, Alan Rickman, Frank Finlay, George Kennedy, Adrienne Corri, Sylvia Anderson, Gareth Thomas and Doris Roberts. And in the two days prior to writing this column I was mourning the celebrated British comedian Victoria Wood, James Bond director Guy Hamilton and, of course, musician extraordinaire Prince.

While each of these creative talents merits a memorial of their own, as you've probably guessed from the picture and intro at the top of this page I'm focusing my attention on Prince Rogers Nelson and, specifically, his work in and around the film industry.

Before anybody starts worrying, I'm not about to launch into a bizarre screed about what an underrated actor Prince was. While he was a peerless musician, his acting talents were much more limited and prosaic. This is why his greatest cinematic venture will always be the 1987 concert film *Sign O' the Times*, which hit upon the perfect balance of musical performances intercut with short dramatic sequences serving as thematic linking material. Showcasing Prince's astonishing musical skills, ***Sign O' the Times* remains one of the greatest concert movies ever made.** Metallica recently tried a similar trick with *Metallica: Through the Never* but didn't hit the same highs.

Of Prince's three other movie forays, the best and most noteworthy is the 1984 rock musical *Purple Rain*. It may be pretty hokey in terms of story and acting, but this semi-autobiographical tale of a brash Minnesota musician struggling to make

a name for himself whilst dealing with an abusive home life thrives on the unbridled charisma and energy of its leading man whenever he takes to the stage. Yes, it's an extended music video for the album of the same name, but that doesn't prevent *Purple Rain* from being a rousing and mesmerising flick that deservedly went on to make nearly \$70m at the US box office.

Sadly, the little master's next movie *Under the Cherry Moon* (1986) fell some way short. The music is as good as ever, but the plot reveals a ludicrous vanity project that casts the pop star as a gigolo who falls in love with a wealthy young heiress. The film did at least give Kristen Scott Thomas her big acting break, and is amusing enough (whether intentionally or not...) to make it just about bearable.

The same definitely cannot be said for *Graffiti Bridge* (1990), an incoherent sequel to *Purple Rain* that struggles to balance Prince the director's love of writhing ladies with Prince the screenwriter's spiritual aspirations for the story. It's only worth owning if you are a real completist.

## 'Get the funk up!'

Prince's links to cinema don't just end with the films he appeared in, though. From *Risky Business* to *Pretty Woman*, *Showgirls* to *Happy Feet*, his music graced soundtracks to numerous movies across the decades. My favourite example, however, will always be the soundtrack album he created for Tim Burton's blockbuster *Batman*. What I wouldn't give to have seen the looks on the faces of the director and studio executives behind this dark, Gothic superhero flick when they first sat down together to listen to *Batdance*... ■

*Do you have a favourite concert movie to rock your cinema room? Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

**Anton van Beek's** love of all things Prince means that he spent much of his teenage years only wearing purple and trying to learn to play the guitar



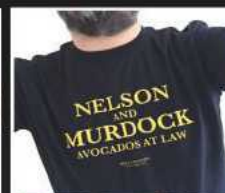
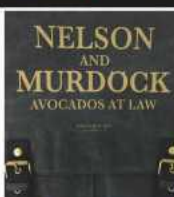


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# In The Mix

Mumbling dialogue in movies getting you down? **Jon Thompson** says cinema speakers aren't to blame. Instead, it's the people who can't be bothered to EQ the system properly

**THE TOPIC OF** dialogue intelligibility has raised its head once again, this time in the blockbuster Warner Bros flick *Batman v Superman: Dawn of Justice* (pictured). Some people were complaining that they couldn't hear the dialogue, yet Hans Zimmer, the soundtrack composer, has blamed cinema loudspeakers, affronted by the suggestion that his pounding score made the chatter in the latest superhero match-up inaudible.

On the BBC Radio 4 *Today* programme, Zimmer said: 'I don't have control over it. Nobody sets out to make an incomprehensible movie. When we mixed the film, we mixed it to the highest possible standard and we could hear every word.' The German-born composer added: 'So what's our choice? To create towards the lowest common denominator or tell people "Make your sound systems better?"'

The HCC team attended a screening in 70mm of the movie at the Odeon Leicester Square – arguably the UK's most famous cinema. As this was a premiere showing, Warner Bros had rehearsed it a number of times and spent hours assessing the sound system. This was going to look and sound the best it could in that venue. And, in my opinion, the soundmix is full-on but the dialogue is fine; very intelligible amidst the wall of sound that the movie proffers for two-and-a-half hours.

## The elephant in the room

In fact, Zimmer is both right and wrong. Most cinemas, certainly in the UK, have very good sound systems. A lot of modern multiplexes use JBL ScreenArray speakers. There's nothing wrong with them. Some screens may have other brands but they are also competent. Mr Zimmer has missed a major point as to why you get issues with dialogue intelligibility – and it's room acoustics and EQ.

It may surprise you, but all modern multiplexes are designed to a standard that is very good acoustically. But room EQ is still required, analysing the characteristics of a room and using hardcore mathematics to work out how to correct any issues to a known standard. The standard to which all cinemas should be EQ'd is called the Dolby X-Curve.

If the room EQ is off or badly implemented – which I have found in many cinemas as no one has been bothered – you will find it hard to hear the dialogue. In *Batman v Superman...*, Ben Affleck's bass-ridden vocals will be borderline if the EQ is awry. (With TV dramas where people complain about hard-to-hear speech it's more typically down to the poor speakers of a flatscreen telly. These programmes are mixed in high-end mixing theatres; in there it will be fine and you will be able to make out what they are saying even if they're mumbling).

**If you are in a cinema and you find you can't hear the dialogue, find a general manager, not a popcorn jockey.**

Tell them they need to get the cinema correctly EQ'd otherwise you will find another establishment for your business. You may be challenged by a reply that is usually 'What? I need to turn up the volume?' If that's the case, email or – even better – tweet the cinema chain in question asking them to sort out the sound system EQ. The correct term is B-Chain sound equalization.

Because only by complaining can we hope cinemas get better. Most are cheap and don't want to pay for equipment to be calibrated. Go elsewhere until they sort it out! Then Hans Zimmer can sleep at night knowing his music is enhancing the movie and not proving a distraction ■

*Is there a commercial cinema you want to praise?  
Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

When he's not in his screening room, **Jon Thompson** tweets about Hollywood gossip, movie-making and digital mastering at [@johnnyfocal](https://twitter.com/johnnyfocal)



# syncbox 'TALK'



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**Name/Position**  
Paul Tuffey  
Managing Director

**Project name**  
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**Completion date**  
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*"Syncbox is easy to fit, it offers a very neat finish and allows for very slim TV brackets to be installed whereas other solutions do not allow for this."*





# *How to...* **Set up your TV in 20 minutes**

So you've bought a new telly, unboxed it and plugged it into the mains. Many owners would just kick back and start watching without ever changing settings, but you're an informed *HCC* reader who knows there's more you should do to get a better picture from your display. Fortunately, there are simple steps you can take to optimise your TV setup. And you can do this in under 20 minutes and don't even need to know your HDMI from your HDCP. **Vincent Teoh** is your guide



**Give your new TV  
some love by taking  
time to make image  
adjustments**

## Choose the right picture mode

If you can only be bothered to follow one step, then make it this, because once you select the correct picture preset, half the battle is already won. Out of the box, your TV is likely to use a picture preset that results in an image that's overly blue, noisy, and toting fake-looking motion.

Luckily, most manufacturers include a more accurate picture mode in the TV's menu, which usually disables much of the superfluous video processing (such as sharpening, dynamic contrast and noise reduction that I'll be discussing in subsequent steps) in one fell swoop.

Typically, on LG and Sony TVs this would be the Cinema mode; on Philips and Samsungs, Movie; and on Panasonic TVs, True Cinema. While the names of these presets suggest they're only suitable for watching films, you can use them to view all types of programmes including soaps, news and sports, since the same white point and colour standard is used across the film and broadcast industry.

## Adjust the backlight to suit your room

If you own an LED LCD TV (the majority of TVs on sale these days), proper backlight management is critical to a better viewing experience. In a dark room, setting your TV's backlight too high will not only make for uncomfortable viewing, but also magnify any uniformity issues (areas where the backlight is too strong or weak) on screen. However, in a brighter room or during daytime, you'd want to raise your TV's backlight, similar to how you need to increase the brightness of your smartphone/tablet/laptop in the presence of strong ambient light.

On most LED TVs, a good rule of thumb for darkened-room viewing is to set the backlight between one-third and half of its maximum adjustable value. Although OLED TVs technically don't have a backlight (they're self-emitting), manufacturers have implemented a corresponding OLED Light slider – the same guideline applies. Of course, you can skip this step if you're still using a plasma TV.

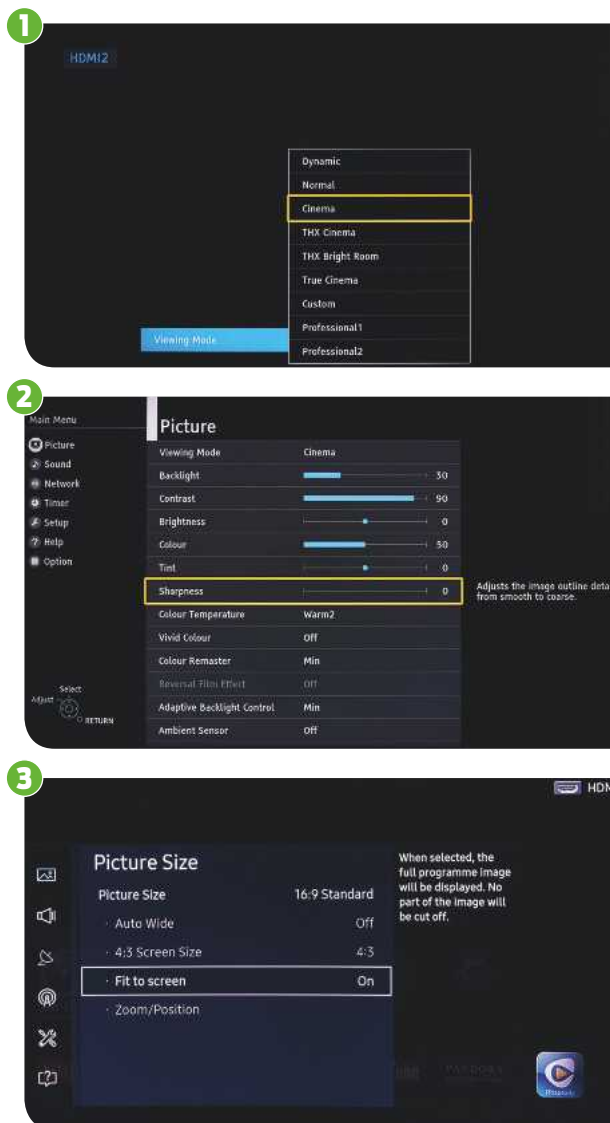
## Aim for neutral sharpness

Some users mistakenly think a higher 'Sharpness' setting can increase perceived detail and is therefore a good thing. Nothing can be further from the truth. Setting your TV's sharpness too high not only introduces ringing and halos around high-contrast borders (a good example is the scrolling text against a darker/ lighter background in news channels), but also amplifies jaggedness and noise. To test the latter for yourself, the next time you watch a film with even the lightest sheen of film grain, try increasing your TV's sharpness to near maximum and see the picture turn grittier and noisier in front of your eyes.

The simplest thing to do is to aim for neutral sharpness – neither adding excessive edge enhancement or unduly blurring the picture either. On most TVs this equates to a Sharpness value of '0', although on Sony's sets it's '50'.

## Disable overscan

Overscan is a legacy carry-over that was originally intended to crop away non-picture data found along the edges of the image in analogue broadcasting. It shouldn't have any place in the digital TV era. The problem is, most modern TVs still have overscan enabled by default, so not only are you missing out on detail along the extremities of the screen, the image also looks softer because it has to be scaled instead of 1:1 pixel-mapped (i.e. each pixel from the source is displayed precisely on one or two pixels



1. Modern TVs come with a variety of picture presets – some, such as Dynamic, should always be avoided!

2. Sharpness tools sound like a smart idea, but will introduce artefacts and ramp up noise if set too high

3. Make sure you are seeing all of an image by disabling overscan

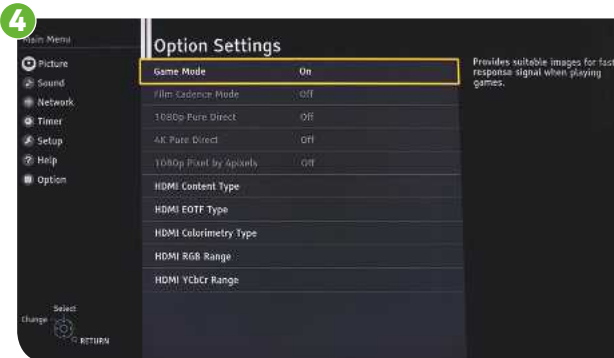
on the TV). Overscanning can usually be disabled through your TV's aspect ratio control. Again, differing brands employ different terminology. On LG TVs, set aspect ratio to 'Just Scan'; Panasonic, 16:9 Overscan 'Off'; Philips, Picture Format 'Unscaled'; Samsung, Screen Fit 'On'; and Sony, 'Full Pixel'.

## Turn off dynamic contrast

Dynamic contrast is a technique designed by manufacturers to artificially boost the perceived contrast on TVs by dropping the black floor or raising the contrast automatically depending on the average brightness of the scene. Because the adjustments are done continuously on-the-fly, luminance fluctuations from scene to scene are not uncommon, and can be jarring. And while black stretching and white boosting can make dark scenes look blacker and bright scenes look brighter respectively, they will also crush the shadow and highlight detailing in these areas. Switch off all dynamic contrast or black adjust options, and you'll be rewarded with a more consistent viewing experience.

The same applies to light sensors. Although having a sensor that detects the amount of ambient light in your room and adjusts the TV image accordingly sounds good in theory, in practice the technology can be unreliable and distractingly irksome.





## Kill noise reduction

I've written about this in a previous *HCC*, but I can't stress it enough: noise reduction tools are evil, evil things that destroy fine detail from pristine images and cause unnecessary motion smearing on screen. No in-TV noise reduction processing is clever enough to tell without fail the difference between unwanted noise and the actual fine detail that's present within the content itself.

There's no reason whatsoever to engage noise reduction on your TV for high-quality video sources. Any noise seen in a high-res digital format such as Blu-ray is likely to be film grain that's either part of the movie or intentionally added during post-processing. To use in-TV noise reduction systems to suppress this will subvert the artistic intent of the director, causing movies to look sterile and less filmic.

## Master your TV's motion

Every new TV on the market today employs sample-and-hold motion driving, which on its own results in lower motion clarity than that produced by impulse-type displays such as the CRTs and plasmas of yesteryear. To compensate, manufacturers usually enable motion interpolation by default, but this approach can create more problems, such as 'soap opera effect' to 24fps material (most of your lovely Blu-rays), causing them to look like cheaply-shot video. Overly aggressive motion interpolation also leads to artefacts which manifest as shimmering, haloing, tearing or 'triple ball effect', especially around objects moving across a complex background.

I recommend never increasing a motion enhancement option beyond its lowest setting, and ideally I'd disable it altogether for watching films. LG's motion processing control is called TruMotion; Panasonic, Intelligent Frame Creation; Philips, HD Natural Motion; Samsung, Auto Motion Plus; and Sony, Motionflow.

## Get a lower lag for gaming

If you frequently play reflex-based games (such as first-person shooters) and like winning, this is a good tip for

you. The heavy video processing on modern TVs increases input lag (the delay from pressing a controller button to the action happening on screen), but most TV makers offer a Game mode to cut down on picture processing and reduce lag times. Track down and engage Game mode on your TV, and games should feel more responsive and less sluggish – you'll be climbing up the ranking table in no time.

Of course, image quality will take a hit in Game mode, but I'd argue that responsiveness is more important when gaming competitively – the prettiest picture possible when playing *Call of Duty* is one where your gamertag tops the leaderboard. It goes without saying, but exit Game mode once you've finished playing to restore your display's image quality for watching TV.

## Set up your video chain correctly

Outside the TV user menu, there are other steps you can take to ensure you're getting the best viewing experience. The first is to set up your video sources correctly – "garbage in, garbage out" is a truism that holds up even in this day and age. Whenever possible, use HDMI connections for the purest digital signal and highest picture quality.

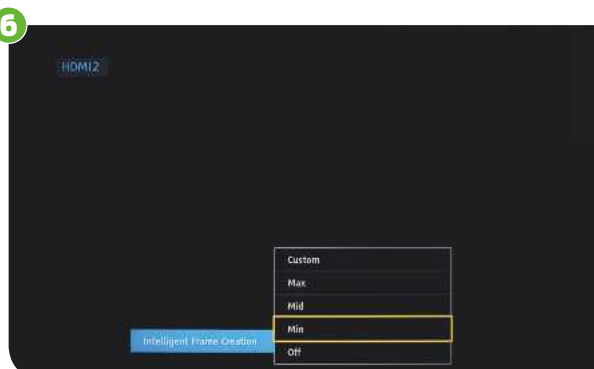
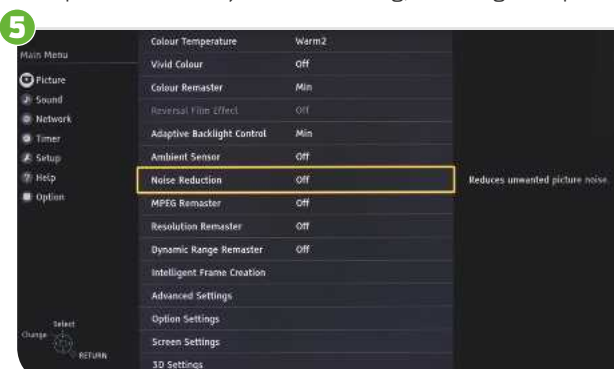
When connecting video sources through an AV receiver to the TV, in most cases it's better to enable passthrough mode on the AVR so that the video signal arrives at the television without pre-processing. I've seen even premium AV receivers applying the wrong deinterlacing mode or refresh rate to the original video signal, leading to tearing or stuttering artefacts appearing on screen through no fault of the TV at all. It's also not uncommon to find 4K upscalers on AVRs underperforming compared to a TV's own engine.

## Optimise your screen positioning

LED TVs lose contrast and saturation off-axis, so it's important to make sure you sit straight-on to the TV to get the highest contrast and lushest colours. This applies vertically, too – wall-mounting an LED flatscreen too high without angling it downwards will wash out its perceived colours and contrast.

Certain Samsung plasmas featured an anti-reflection filter which darkened the picture when viewed from above or below; whereas all passive 3D TVs will exhibit excessive crosstalk outside 15 degrees of eye level vertically. Bottom line? Try to place your TV at eye level relative to your seating position.

In this guide, I've not covered many common controls available on TVs, because they're either usually correct out of the box (e.g. brightness), or require measuring equipment to set up properly (e.g. White Balance and Colour Management). Nevertheless, the above 10 steps should stand you in good stead to extract a better picture from your display ■



### TOP TIP

**GO A LITTLE DEEPER:** Dedicated calibration discs, such as Joe Kane's *Digital Video Essentials* and Spears and Munsil's *HD Benchmark* offer test patterns as well as video clips to assess your TV's performance

**4. Noise reduction modes struggle to differentiate between noise and fine image detail**

**5. For motion smoothing systems Sticking to a low setting (or playing with a custom mode) is advised**

**6. Like bigscreen gaming? Then don't ignore your TV's Game mode, as this strips away image processing to reduce input lag**

### DO IT!

**COST:** Nothing!

**TIME:** Give yourself around 20 minutes to run through these steps – even less if you're familiar with your TV's menus

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# Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **Team HCC** is here to help

## No system that suits me

I'm currently in the process of looking to upgrade to a Panasonic 55in 4K TV, and I have also been looking at the options of upgrading my current Panasonic home cinema system to match.

I see Panasonic has launched an Ultra HD Blu-ray deck, but at the moment there seems to be little evidence of manufacturers launching home cinema systems in this format, with more of a push towards soundbars as a lifestyle choice.

Will this be that we are forced to purchase a soundbar or home cinema separates to achieve our goals? Or, with the new format, will manufacturers launch home cinema systems to match? Not everyone wants soundbars or a system comprising of separates...

Also will the BBC and Sky launch the format on their streaming services? Broadcasters are in the same position as when HD launched – most of their back catalogues of films, programming had to be remastered in HD.  
*David*

**Mark Craven replies:** I've written about the dearth of new all-in-one home cinema systems in my column this issue (see p75)

All-in-one systems: not 4K BD ready



– and you're certainly right that there's a push towards soundbars (and soundbases) when it comes to home cinema audio at the entry-level price point. The simple truth is that these products have proved very good at delivering what a majority of buyers want – a vast improvement over the sound quality of their TV (especially as thinner screens have meant less space for largescale drivers) but without cables to manage.

Rather than waiting for a system to emerge with integrated Ultra HD Blu-ray playback, you might prefer to purchase a standalone player (there are currently options from Panasonic and Samsung) and lace this up to your current

Panasonic all-in-one system. This could be done by using the audio-only HDMI output on the new deck (assuming your system has HDMI inputs for secondary sources), and sending the 4K HDR visuals direct to the TV via the player's primary HDMI output. Yes, that's a bit of a faff, but right now it's your best option if you don't want to start investing in a separates-based setup.

As for Sky and BBC 4K: you can expect the former to bring content to its new Sky Q platform starting this year. The BBC, on the other hand, hasn't confirmed any plans for 4K content – either over-the-air or via its iPlayer streaming portal. Don't wait up for it...

## Give us a list!

Just thinking... I love a film list. I have a few 'on the go': the IMDb Top 250; the AFI 100, Barry Norman's 100 etc. They're a great way to get taken to films that I wouldn't otherwise watch and more often than not the effort is rewarded. As of now I've seen 243 of the IMDb Top 250; all the outstanding ones are 2015/2016 films that I can't watch at the cinema or aren't out on Blu-ray yet. Any chance of doing an HCC Top 100 or something? Perhaps you could ask people to submit a Top 5 or 10 and construct a Top 100 that way.

*Marcus Paisley*

**Anton van Beek replies:** A Top 100? As you'll see elsewhere on this page, we struggle picking a top ten. That said, 'crowd-sourcing' a list from HCC readers sounds like a smart idea. So send us your top 10 favourite movies of all time and we'll get our spreadsheet going...

The Shawshank Redemption:  
The IMDb's top-rated movie



## Legend? I won't let you get off Scott free...

I enjoy reading the 'Collecting..' feature and I know it is subjective, but the Ridley Scott selection by 'Team HCC' in a recent issue [HCC #258, following our BD review of *The Martian*] was just obtuse.

*Hannibal* isn't even the best Hannibal Lecter film: Jonathan Demme's *The Silence of the Lambs* and Michael Mann's *Manhunter* are both better. *Exodus: Gods & Kings* was roundly panned by just about everyone, and would you really rather have *Legend* in your film collection than *The Duellists*, *Someone to Watch Over Me*, *Black Rain*, *Kingdom of Heaven* or *Robin Hood*? I know people would argue with some of my selections, but the whole world would argue with yours. *Legend* is pants and *American Gangster* is not much better...

Only fair I open myself up to some criticism too, I suppose. So, assuming I'm not allowed to include *The Martian*, my top ten Ridley Scott films would be:

1. *Blade Runner*
2. *Alien*
3. *Gladiator*
4. *The Duellists*
5. *Black Hawk Down*
6. *Prometheus*
7. *Thelma & Louise*
8. *Robin Hood*
9. *Someone To Watch Over Me*
10. *Kingdom Of Heaven*

Unfortunately, I don't think you can get *Someone To Watch Over Me* on Blu-ray yet, which is a shame as it has some really lovely visuals. *The Duellists* is interesting because for a long time you could only get in on Blu-ray as a Region B Spanish import, but it is now available as a Region A US disc, fine if you have suitable equipment.

I expect my choice of *Kingdom Of Heaven* is most contentious, but at the end of the day I would rather watch it than *American Gangster*, *Hannibal* or *Legend*. It has some great battle scenes and is ripe for re-evaluation in my opinion!

Simon

**Mark Craven replies:** Hi Simon. Thanks for the letter and taking the time to rustle up your own Ridley Scott list!

As you say, these roundups are subjective, and we know that we can't match everyone's tastes. To be honest, the Ridley Scott one was hard to finalise! As we're sure you can imagine, the first four or five choices were very easy; the next ones not so much. There were quite a lot of arguments. *Robin Hood* was in, then it was out. So was *Matchstick Men*. *Legend* was a late addition, partly because it has an interesting Blu-ray history and it illustrates the breadth of Scott's career.

## ★ Star Letter...

### Keep spoilers to yourself!

Love the magazine but your constant spoilers are driving me crazy! Not only do you give away key moments – revealing even the endings of movies in your disc reviews – you also do it in your equipment reviews!

The *Spectre* Blu-ray review was a prime example, and you'll often review equipment with lines like 'in the final scene where blah kills blah the speakers come into their own.' Is this really necessary?

I'm a home cinema enthusiast. The magazine is called *Home Cinema Choice*. Surely the clue is in the name? I, like many of your readers, don't as a rule go to a cinema that often. I have a decent home cinema and wait for the Blu-ray release or then a showing on Sky or Netflix to watch most of my movies.

I'm sure you can review a film without all the spoilers, so stop it!

Russell Hogan

**Mark Craven replies:** Sorry! Believe it or not, the editorial team are constantly on the lookout for spoilers in the magazine and we do try to avoid them. However, it would seem we are not doing a good enough job.

It's often tricky to find the right balance when talking about movies – some plot description is usually a necessary part

of a review – but we hate to spoil anyone's enjoyment. That's not what HCC is about at all. And with our Blu-ray review of the latest James Bond flick, we did actually think we'd kept it spoiler-free in regards to the Big Plot Point That We Won't Mention.

Is it really necessary to include scene-specific movie references in our hardware reviews? Probably not totally necessary, but we feel that they help ground the review in the real-world, providing an example of the material that we've used during an audition and making the reviews more interesting and fun to read.

However, we've taken your comments fully onboard and will try to be spoiler-free in the future (unless we're talking about old movies – or do we still need to keep Darth Vader's identity under wraps)?

Star letter-writer Russell grabs *Snoopy and Charlie Brown: The Peanuts Movie* on Blu-ray. Based on the iconic comic strip created by Charles M. Schulz, this animated box office smash is available to own on Digital HD from May 13, and on DVD and Blu-ray from May 30, courtesy of Twentieth Century Fox Home Entertainment.



And you're more than welcome to take a look at our Sylvester Stallone collection this issue (p108) and rate our selection!

**Anton van Beek replies:** You're right that *Someone to Watch Over Me* has never enjoyed a Blu-ray release. Those wanting to spin this 1987 noirish crime thriller (starring Tom Berenger and Mimi Rogers) have to make do with tracking down a now out-of-print DVD edition. Expect to pay around £15.

### Firmware thieves!

Regarding Steve May's column about the removal of certain features via firmware updates [HCC #258]... Can they legally do that?

Surely when you buy a piece of AV equipment you pay for a certain set of features. Dolby Atmos, DTS:X, various music apps, BBC iPlayer etc... You effectively seal a contract with the manufacturer. If those features are then removed then the manufacturer or supplier of those features must be in breach of contract.

Perhaps your legal eagles could look into this seemingly shoddy practice. After all,

if Ford sold a car with a satnav and then announced a few years later it was shutting down certain features, they would get their heads handed to them. It appears these companies are applying dodgy practices and riding roughshod over AV enthusiasts. The phrase 'caveat emptor' applies even more these days. I look forward to a follow-up piece in the near future, perhaps a name and shame list.

Warmest regards for a great magazine.  
Tim Hawkin

**Steve May replies:** I assume AV companies are legally fine to remove some features via firmware updates – otherwise they wouldn't be doing it – and that it's covered in smallprint. And a lot that gets removed is being delivered via third parties – Skype functionality, catchup apps, etc. However, we're going to raise this issue and see what the response is.

### Are my speakers letting my amp down?

Hi. I am currently wanting to upgrade my speakers. At the moment I have eleven



**Bowers and Wilkins M1s and four B&W subwoofers (two ASW610s and two more ASW608s), all connected to a Yamaha RX-A3050 and an MX-A5000 11-channel power amplifier.**

It sounds incredible but I feel the speakers let the amps down a little. My room isn't huge (about 15ft by 15ft) so most people would probably say what I have is fine but I'd like to know your thoughts on better-sounding speakers. Four of the M1s are used for Atmos channels, although they are not mounted to the ceiling.

*Paul McGroarty*

**Richard Stevenson replies:** Hi Paul. Firstly we hoped to get some input out of Bowers & Wilkins on this but it seems the company's audio geeks are busy beaver away on diamond-flavoured tweeters...

Anyway, our suggestion would be that you're right and that the combination of the Yamaha RX-A3050 and the MX-A5000 power amplifier probably deserves better than your army of B&W M1s, but we wouldn't be so rash as to recommend a complete overhaul. You're obviously already happy with the sound performance and replacing 11 speakers would be expensive. And we assume that some of these – particularly the four Atmos channels – are in places where much larger speakers simply wouldn't be possible.

However, the most important part of any soundfield is definitely the front left/centre/right stage (LCR), not only in terms of dialogue reproduction. Even the most immersive Dolby Atmos mix will be 'front-heavy' and this is where you might want to first consider upgrading your speakers.

We looked at the B&W M1s towards the end of 2012, and loved them. These aren't budget satellite speakers in any regard. Yet their 4in midbass drivers can only be expected to do so much when it comes to sheer scale. Switching

to larger enclosures with larger drivers for your LCR speakers will fill out that front soundstage, especially with the headroom of the Yamaha amp to call upon.

This is why we raised your question with Bowers, as we wanted to know what their recommendation would be from its floorstanding speaker range as a good tonal match to the M1s.

Perhaps consider the 684s from B&W's 600 Series. A pair of these for your L/R channels is about £800; the HT62 S2 centre channel speaker from the 600 Series is £350. These all employ dual 5in midbass drivers and 1in aluminium dome tweeters of a similar construction to the M1s. They're not the widest of speakers, so you may be able to accommodate them. They're not the prettiest either...

A final point. A good AV dealer should be able to set you up with a demo before you buy. And, if you bought your Yamaha duo from a dealer and they know you're serious about your setup and likely to spend another chunk of money, they *may* even be persuaded to let you borrow them for a weekend to see how they mesh with your M1s.

Of course, if you upgrade any of your speakers, remember to re-run the YPAO auto-EQ suite on the Yamaha RX-A3050 to fine-tune performance.

### **Have I been misled about Ultra HD Blu-ray?**

**Dear Sir/Madam. Your latest magazine [HCC #259] is covered and filled with your wonderment at the 'latest format', Ultra HD Blu-ray.**

The last paragraph in the Panasonic DMP-UB900 review mentions 'first-generation...'. However, a friend of mine was a 'first generation' purchaser of a 4K Sony TV and he got a 4K Blu-ray player from Oppo. However, he has yet to watch anything

meaningful in 4K on this setup, as some USB sticks with 'example footage' is all that is available/will play on this combo. Unless even extra cash is spent on some possible streaming content which may or may not work.

Both these components were touted in your magazine as the 'latest thing' and purchased by my friend not necessarily on your recommendations but as an avid reader of your publication he assumed he was buying quality, futureproof items. There was even an article in your magazine extolling the virtues of 'early adopting' which riled us both. We put virtual 'pen to paper' on that point, too.

You review this 'new format' as first generation but give no column inches to those like my friend – and there must be several – who must be right royally peeved that their purchases seem to have been white elephant buys.

There has been very little about 4K Blu-ray (I differentiate here between 4K Blu-ray and UHD Blu-ray) in the press and the compatibility, or lack thereof, between the two. My friend was unsure whether his Oppo BDP-105 would play the new discs so purchased a couple of UHD Blu-ray titles from an online retailer which have arrived and, when tested, of course they don't play.

The press and industry, in particular the Blu-ray standards panel which has been apparently deciding on whether there even should have been 4K/UHD available on the disc format for several years now, should be ashamed of themselves for yet again misleading the general public.

I am surprised there hasn't been more backlash from people like my friend who bought similar products in the hope of enjoying 4K pictures from a Blu-ray disc. I am also surprised and disappointed that you have not written more about this in your publication.

*J. Crompton*



**B&W's classy M1 satellite speakers, pictured here with the PVID subwoofer**



### Oppo's BDP-105D doesn't play UHD Blu-rays...

deliver the same results as watching an image that is, from the outset, 4K resolution. And this is why our recent issue was discussing the 'new format' – Ultra HD Blu-ray – with some enthusiasm.

I do think your letter touches on a wider issue, however, and one that I fully appreciate – the birth of the Ultra HD Blu-ray format, and the launch of 4K TVs now going back some years, has been poorly handled by the consumer electronics and software industries. You're by no means the only consumer to have been confused by what can seem like conflicting information, technical jargon, evolving standards and slow-to-appear names and logos. This is something that HCC has often highlighted, in addition to running articles and opinion pieces that have attempted to guide readers through the 4K format minefield ■

### Contact us...

Write to HCC, AV Tech Media Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com). Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

**Mark Craven replies:** Thanks for the letter, and I hope I can help clear a few things up as both you and your friend appear to be suffering from format confusion!

You say you're differentiating between '4K Blu-ray' and 'UHD Blu-ray'. This, I think, is where the confusion starts. There aren't two different formats. There is only one.

Ultra HD Blu-ray, as it has been officially named by the Blu-ray Disc Association, requires new playback hardware and isn't compatible with any deck released last year or before. There are – at the moment – only two players that support it, Panasonic's DMP-UB900 (featured last issue) and Samsung's UBD-K8500 (in this issue). The standard delivers images with a pixel resolution of 3,840 x 2,160, commonly known as 4K. Consequently, the AV industry, film studios, content producers, home cinema

enthusiasts and this magazine has regularly described it as '4K Blu-ray.' And, in fact, the software itself is branded '4K Ultra HD' on the sleeve.

The Oppo BDP-105D that your friend purchased is not an Ultra HD Blu-ray player. Launched in 2013, it is a standard Blu-ray player, advertised as such. However, it does feature 4K upscaling, meaning it will upscale a 1,920 x 1,080 resolution Blu-ray image to a resolution of 3,840 x 2,160 before outputting it over HDMI. This upscaling feature is actually supported by many Blu-ray players and AVRs.

It's also a feature of the Sony 4K TV that your friend purchased. That screen has a panel with a 3,840 x 2,160 resolution. Everything that is watched on it is being upscaled to 4K.

So why the need for new 4K formats, be they Ultra HD Blu-ray or 4K streaming services? Because upscaling an image doesn't

## WIN! Great Blu-rays up for grabs...

Just email your answer to [Competitions@homecinemachoice.com](mailto:Competitions@homecinemachoice.com) to be in with a chance to win



### Creed

Get ready for a brand-new chapter in the Rocky saga when boxing drama *Creed* lands a knockout blow on Blu-ray, DVD and Limited Edition Steelbook on May 16,

courtesy of Warner Bros. Home Entertainment. To celebrate, we've got five *Creed* Blu-rays to give away.

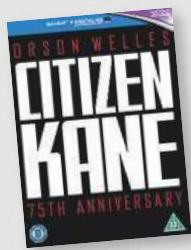
### Question:

Which actor played boxer Apollo Creed in the Rocky films?

### Answer:

- A) Carl Weathers B) Sylvester Stallone  
C) Mr. T

Email your answer with 'Creed' as the subject heading – and don't forget to include your postal address!



### Citizen Kane: 75th Anniversary Edition

Regularly hailed as one of the greatest films ever made, *Citizen Kane* turns 75 this year. To celebrate the event Warner Bros. Home Entertainment has

released a brand-new Blu-ray of the film packed with bonus goodies – and we've got five copies up for grabs!

### Question:

Which of the following was *Citizen Kane*'s 25-year-old star/director/producer/co-writer?

### Answer:

- A) Alfred Hitchcock B) Orson Welles  
C) Howard Hawks

Email your answer with 'Citizen Kane' as the subject heading – and don't forget to include your postal address!



### Orange is the New Black: Season 3

The critically-acclaimed – and extremely funny – TV series about life in a women's prison returns to DVD, Blu-ray and Digital HD on May 16 for its third

season. Thanks to Lionsgate Home Entertainment (UK), we're giving away three copies of the Blu-ray.

### Question:

*Orange is the New Black* actress Kate Mulgrew headlined which *Star Trek* series?

### Answer:

- A) Deep Space Nine B) Voyager  
C) The Next Generation

Email your answer with 'Orange is the New Black 3' as the subject heading – and don't forget to include your postal address!

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- Comp winners' info available on request.
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# Certified: AV-Holic!

HCC reader **Leigh** has used an extension on his house to accommodate his home cinema needs. High-end audio separates, 100in projector screen and a plethora of movie memorabilia make this a room we'd love to kick back in

## Welcome to the AV-Holics Hall of Fame! Introduce yourself...

Hi, my name is Leigh. I'm 43 years old and – when I'm not watching movies – I work as a plumber.

## How long have you been into home cinema – and what was the first setup you had?

I have been in to AV for about 25 years or so now. One of my first systems employed a Panasonic S-VHS video deck connected to a 29in Sony TV.

I also had an old hand-me-down AV amplifier. I think it was a Pioneer that I got from my Dad! Back then I had some old Jamo speakers too.

## So what hardware is in your current system?

My room is projection-based. The screen is a Draper Onyx 100in fixed-frame model with acoustically transparent material. The projector is a JVC DLA-X3, Full HD with active 3D.

For the audio I've gone for separates. I have two power amplifiers, both from ADA [Audio Design Associates]. One is the six-channel PTM-6150, which is rated at 150W-per-channel. Then there's an ADA PF-2502, which is a two-channel, 200W-per-channel amp. These are partnered with an Onkyo PR-SC5509 processor, which is a nine-channel model with THX Ultra2 Plus certification and Audyssey MultEQ XT32 setup.

The speakers are all from Bowers & Wilkins. I have the wall-mountable CT7.3 LCR enclosures for all channels – each of them has twin 8in bass drivers. And for LFE I have a REL G1 subwoofer.

Sources for the cinema room are my Marantz UD9004 Blu-ray player and Xbox One. And a Logitech Harmony remote is used to control it all.

## What do you love the most about having a dedicated cinema room?

I love the fact that I can go in to my movie room at the end of a stressful day, crank up the volume and unwind watching films and listening to music.

The whole family enjoys film nights more now in the comfort of our home rather than go out to the cinema.

### How would you rate the performance of your system?

I think my system is as good as the local cinema, if not better, due to it being small and

'I love that I can go in to my movie room at the end of a stressful day, crank up the volume and unwind'

compact with the components I have in it. The ADA amps really kick out a lot of power and clarity, making my Bowers & Wilkins speakers work really well as they are power-hungry.

### Roughly how much have you spent on the system?

I spent about £12,000 on the initial build. The kit costs roughly between £35,000-£45,000. This does not include the money I've spent on my Blu-ray/DVD collection.

### Whereabouts in your house is the room?

The theatre is off of the kitchen on a side extension, which has the same footprint of the house, around 4.5m x 8m.

### Where did you get the seating?

I purchased the cinema chairs online. Managed to get the last set at a bargain price of £1,200 including delivery...

Left: The cinema room is in a side extension to the main house

Below: Leigh is using a JVC DLA-X3 projector, but has his eye on an upgrade



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Our AV-Holic owns around 650 Blu-rays

**That's quite a disc shelf! How many films have you got on DVD/Blu-ray? And how often do you buy new discs?**

I own roughly 650 Blu-rays and about 200 DVDs. I normally get a couple of Blu-rays every other week.

**What's your favourite bit of kit?**

I think it would be a tough call between the Marantz Blu-ray player and my trusty 12in REL G1 subwoofer.

**What's next on your wishlist?**

The next upgrade would be a new projector. The JVC DLA-X3 I have is awesome but I'm always looking for a better image.

**What do friends and family think of the cinema room?**

Everyone loves the room, especially when football or boxing is on as it turns into a really good, social evening.

**What discs do you use to show off the room?**

*Gravity* sounds amazing through my system, as do most other films, actually. All the *Transformers* movies are good demo discs.

**What are your favourite films?**

I don't think I could choose just one film as my favourite.

I like the *Marvel* and *Star Wars* movies, which is useful as my 10-year-old son likes to repeatedly watch these!



Twin ADA power amps drive the room's seven-channel speaker system in conjunction with an Onkyo processor

**What's your most prized piece of movie memorabilia?**

It's got to be one of my *Star Wars* pieces. Maybe the Hans Solo in carbonite.

**Are you excited by 4K and Dolby Atmos/DTS:X?**

Yes! 4K is the next step up for me. Just holding out for the content to become more available before I buy a player.

As for Dolby Atmos, although it sounds amazing I think it will be a few years before I upgrade. I'm really happy with my speaker system as it is now ■

## Share your system in the mag!

If you want to be in **HCC**, you'll need to send us some hi-res images of your cinema room. Here are a few tips for great-looking pictures:

1. Go big. Set your camera to take images at the largest possible size, and at the highest resolution. Don't worry about cropping or resizing – we will make them print-ready.
2. Get in focus. Make sure your photos are as sharp and clear as possible. If you have one, use a tripod, or place your camera on a flat, steady surface and take pictures on a delay. The sharper they are, the bigger we can print them.
3. Let some light in. While we tend to watch

- movies in the dark, our cinema systems look their best when they are lit. If you can shoot with natural daylight, do so. If your room doesn't get a lot of light (a garage conversion, for instance) then switch on whatever lights are fitted. Avoid using flash wherever possible.
4. Be thorough. Send photos of as much of the room as possible. Images of both the front and back of the room, the kit rack, speakers, seating, disc shelf, movie poster art... The more the merrier.

5. Don't be shy. Send a picture of yourself!
6. Show us more. Got pictures of your room before it was a cinema? Or snaps of work being done? We love to see these, too.

**Email your selection of images to** [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com) with the subject heading 'AV-Holic'. Provide us with some information about your setup – including a full kit list – and we'll then be in touch.



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PRODUCT OF THE YEAR  
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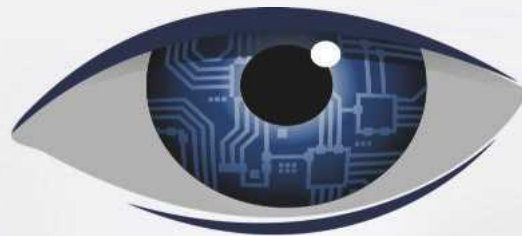
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# PLAYBACK

→ **SOFTWARE HIGHLIGHTS** **CREED** Rocky spin-off is a real knockout on Blu-ray  
**THE BIG SHORT** Award-winning drama gets a DTS:X boost **CITIZEN KANE** Movie masterpiece celebrates its 75th anniversary in style **VICTOR FRANKENSTEIN** Legendary horror story gets a messy makeover **EASY RIDER** Counterculture classic joins the Criterion Collection & MORE!

## The return of the Jedi?

Star Wars: Episode VII – The Force Awakens  
 → Walt Disney → All-region BD

The eagerly-awaited seventh instalment in the *Star Wars* saga explodes onto Blu-ray. Head over to p98 to see if the Force is strong with this HD platter, or if it really belongs to the Dark Side of the AV world...

### HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★
Acceptable	★★★
Disappointing	★★
Dire	★

All prices quoted are approximate and may have changed





# Boxing film comes out fighting

Rocky spin-off lands a huge punch on Blu-ray with its superb picture and sound performance



## → CREED

The last thing the world needed was yet another *Rocky* movie. Although Stallone's 1976 original has stood the test of time, the first four sequels are the very definition of diminishing returns. And if a grand finale to the saga really was necessary, Stallone already provided one himself with 2006's surprisingly poignant *Rocky Balboa*.

All of which makes Ryan Coogler's *Creed* such a wonderful surprise. The film stars Michael B Jordan as Adonis Creed, the illegitimate son of former heavyweight Apollo Creed. Quitting his job at a securities firm to pursue his dream of becoming a professional boxer, Adonis makes tracks to Philadelphia in the hopes of convincing his father's old friend and rival Rocky Balboa (Sylvester Stallone) to train him.

Picking the bruised and battered franchise up off the mat, *Creed* just gets everything right. The story, though familiar, is handled in the most compelling, smart and uplifting way possible. Clearly Coogler doesn't want to break the mold, he just wants to tell a pugilist tale that inspires and entertains. *Creed* does that and so much more.

And, based on this introduction, we'd be happy to see Adonis stepping back in the ring in a sequel if Hollywood sees fit.

**Picture:** Between Coogler's assured direction and Maryse Alberti's stylish cinematography, *Creed* is a great-looking film – something that shines through on Warner's 1080p Blu-ray. There's a genuinely cinematic quality to the digitally-captured 2.40:1 imagery, brought about by a rich colour palette, exquisite clarity and lifelike skin tones. And from the beads of sweat running down Jordan's torso to the crags and crevices etched into Stallone's face, the Blu-ray presentation is no slouch when it comes to fine detailing either.

**Audio:** The disc's immersive DTS-HD MA 7.1 mix is similarly impressive. Dialogue is always forthright and intelligible, and a pleasing surround ambience is given to the movie's locations. But best of all, though, are the fight sequences. Here, sound design captures each punishing body shot and envelops you with the roar of the crowd.

**Extras:** As is so often the case these days, the only real disappointment comes from this disc's modest selection of bonus goodies.

*Know the Past, Own the Future* (15 mins) finds the cast and crew discussing the previous *Rocky* films and the creation of this new movie. Meanwhile, *Becoming Adonis* (six mins) focuses on Michael B Jordan's training regime and the filming of the fight scenes. Last up is a fairly sizeable collection of deleted scenes (20 mins).



## HCC VERDICT

### Creed

→ Warner Bros. → All-region BD  
→ £25

**WE SAY:** Extras may be thin on the ground, but the superb picture and sound quality ensures that *Creed* is a heavyweight Blu-ray champion

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



## Room

StudioCanal → Region B BD  
£23



It may be a relatively small movie, but this emotionally draining drama is an ambitious piece of filmmaking

centred on outstanding performances from Brie Larson and newcomer Jacob Tremblay. Entering *Room* is something that should be done with as few spoilers as possible; suffice to say that the plot focuses on a young woman and her five-year-old son who have been held captive for years in a squalid 11' x 11' cell. As well as a crisply detailed 2.40:1 Full HD encode and subtle DTS-HD MA 5.1 audio, this UK BD also serves up a fascinating commentary and seven featurettes.



## Spotlight

Entertainment One → Region B BD  
£25



Every bit as gripping as any fictional conspiracy thriller, this explosive fact-based, star-studded drama tells

the story of a small team of Boston reporters unravelling a history of covered-up sexual abuse cases involving Catholic priests. As a tribute to the art of investigative journalism, *Spotlight* ranks up there with the iconic *All the President's Men*. A powerful and superbly acted piece of cinema. Extra features on this Blu-ray are a touch lacking in depth, but the disc measures up elsewhere, with a handsome 1.85:1 1080p image and subtle DTS-HD MA 5.1 sonics.



## The Night Manager

Sony Pictures → Region B BD  
£30



If you felt *Spectre* was a little short on spy intrigue and need a reminder of what a good espionage story looks like, then the BBC's recent six-part adaptation of John Le Carré's

novel *The Night Manager* should fit the bill perfectly. Cleverly updated from its 1990s origins and wonderfully acted, this stylish miniseries serves up a nail-biting journey into the world of illegal arms dealing. Spread across two platters, the cleanly defined 1080i50 encodes do wonders for the show's lavish production design; extra features take the form of 11 cast and crew interviews.



# Making comedy from a crisis

Adam McKay turns an economics lecture into a comic drama with DTS:X audio

## → THE BIG SHORT

Those who sat through the end credits to director Adam McKay's 2010 action comedy *The Other Guys* were treated to a series of facts, figures and infographics that set out to explain the reasons behind the financial crisis of 2007/8. McKay's latest film, *The Big Short*, is essentially the feature-length version of that story.

Based on the non-fiction book of the same name by financial journalist Michael Lewis, *The Big Short* follows various New York investors who, separately, discover the truth about the impending collapse of the housing market and use the information to bet against it. In so doing, it lays out the recklessness and corruption of various financial institutions, and shows how those involved were too blinkered by their immediate success to realise that it could ever come crashing down.

This is, of course, pretty heavy stuff for a comic drama. And as the film goes to lengths to point out, it's loaded with terminology that nobody outside the banking industry actually understands. To get around this, every now and then it cuts to Margot Robbie in a bubble bath explaining mortgage bonds or Selma Gomez demonstrating CDOs (Collateralized Debt Obligations) via a game of blackjack.

As fascinating as all of this is, there's a bit of a hole in the heart of McKay's film. After all, *The Big Short*'s protagonists (including Christian Bale and Steve Carell) aren't heroes who set out to warn common folk of the impending financial doom. They're hedge fund managers and other investors who saw the warning signs and used them to get



rich. Because of this, it's difficult to sympathise with them. *The Big Short* is a slick, witty tale, but hardly a heartwarming one.

**Picture:** The film hits Blu-ray with a terrific 2.40:1 Full HD encode. A well-resolved grain structure lends the image an authentically cinematic veneer, and colour reproduction is first-rate – despite this not being the flashiest flick you'll ever watch. Blacks are true and close-ups reveal a wealth of detail and textures in every surface.

**Audio:** In a rather unexpected move, Paramount's Blu-ray packs a DTS:X soundtrack. However, before you get too excited, it's a rather restrained affair that makes subtle use of your height speakers to give a greater sense of atmosphere.

**Extras:** The BD delivers five featurettes looking at aspects of the production (the cast, the director, production design, etc) as well as five deleted scenes that flesh out one sub-plot in particular.



Margot Robbie is one of the celebs on hand to help explain financial terms

## HCC VERDICT

### The Big Short

→ Paramount/Universal Pictures  
→ All-region BD → £25

**WE SAY:** An excellent transfer – and DTS:X audio – make this comic drama appealing on Blu-ray

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★



# Is the Force still strong?

It may be the UK's fastest-selling Blu-ray, but how does *Star Wars: Episode VII – The Force Awakens* measure up as an AV experience?



DEMO SCREEN...

Star Wars: Episode VII – The Force Awakens

Time code: 032.17 – 035.44



**The Falcon flies again:** Fleeing the First Order on Jakku, Rey and Finn steal a familiar-looking ship and (after a rather bumpy take-off) take to the skies with two TIE Fighters on their tail...



**Hot pursuit:** The roar of ion engines and laser fire zips around the 7.1-channel soundstage as the TIE Fighters chase the Falcon through canyons and over dunes as they navigate the desert wastes.



**Belly of the beast:** The action moves inside the wreckage of a crashed Imperial Star Destroyer, with the Blu-ray's stunning 2.40:1 encode having no difficulty keeping up with the roving camera.



**Flipping them off:** Emerging from the wreckage, Rey flips the Falcon, allowing Finn to take out the last TIE Fighter in spectacular fashion. A suitably flashy finale to a superb AV sequence.



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## → STAR WARS: EPISODE VII – THE FORCE AWAKENS

Thirty years have passed since the fall of the Empire and the galaxy is in turmoil once again. Luke Skywalker has disappeared and a new threat calling itself the First Order has risen from the ashes of the Empire, bringing with it a new world-destroying super-weapon. Meanwhile, on the desolate desert planet of Jakku, a spirited young scavenger called Rey (Daisy Ridley) befriends a cute little droid and ends up on the run with former Stormtrooper Finn (John Boyega).

To say that there was a lot riding on ...*The Force Awakens* is a giant understatement. As the first instalment in the *Star Wars* saga to be released by Disney, it had to justify the £2.5bn the studio spent buying Lucasfilm from George Lucas, and assuage the fears of fans still smarting from the prequel trilogy. And it succeeds.

The hiring of J.J. Abrams to helm the film was a smart move. Lacking any strong visual style of his own (outside of a love of lens flare, which is thankfully dialled back here), but with a proven track record in blockbuster cinema, he's the ultimate safe pair of hands for a project such as this.

But what about complaints that ...*The Force Awakens* is little more than a 'greatest hits' package, re-staging fondly remembered parts of the original trilogy? Well, it would be great to see the franchise journeying into new areas (which is what we're expecting from Rian Johnson's *Episode VIII*), but this flick is rightly concerned with re-introducing audiences to the *Star Wars* universe and reminding them why they fell in love with it in the first place.

It also succeeds in passing the baton from one generation of characters to another. The returning cast do their party pieces and generate a welcome wave of nostalgia, while the film's new heroes (the aforementioned Ridley and Boyega, plus Oscar Isaac) prove worthy counterparts to Han, Luke and Leia.

And then there's Adam Driver, whose ominous yet vulnerable reading of Darth Vader-wannabe Kylo Ren is pitched precisely where Anakin Skywalker should have been by the midway point in the prequels.



*The Force Awakens* feels like it exists inside the same universe as the original trilogy. And for that, we should be very happy indeed.

**Picture:** The phrase 'reference status' was made for transfers like the one that graces this Blu-ray. Shot primarily on 35mm film (with selected sequences captured with IMAX 70mm cameras), it results in a Blu-ray with a gob-smacking AVC 2.40:1 1080p encode that positively relishes the chance to showcase vibrant primaries whenever a lightsaber is ignited or exacting details in the movie's well-worn and seemingly lived-in locations. 2D-only, though – a 3D release is due later this year.

**Audio:** With Disney still refusing to jump aboard the Dolby Atmos/DTS:X train, a DTS-HD MA 7.1 mix is the best we could expect from this disc. Thankfully, the track we've got is an absolute stunner; a superbly balanced mix that fills the soundstage with positional effects and brooding bass, keeps dialogue crystal clear, and brings terrific range and depth to John Williams' score. Play it loud.

**Extras:** The headline bonus feature in this two-disc set is *Secrets of the Force Awakens: A Cinematic Journey*. Clocking in at just shy of 70 minutes, it's one of the most satisfying *Making of...* documentaries we've come across in quite a while.

Supporting this are six shorter featurettes looking at various aspects of the production. These range from the first time the entire cast came together for a script read-through, to designing BB-8 (left), creating practical creature effects, and composing the score.

Also included are six unfinished deleted scenes (four mins) and a promo for Lucasfilm's *Force for Change* charity programme (three mins).

Fans also get to choose between the regular sleeve or limited edition 'Dark Side' and 'Light Side' slipcases. >



'Who's going to tell him that we left the gas on?'



### HCC VERDICT

#### *Star Wars: Episode VII – The Force Awakens*

→ Walt Disney → All-region BD  
→ £25

**WE SAY:** The *Star Wars* saga gets a joyous resurrection on a Blu-ray disc that delivers AV perfection

Movie: ★★★★★★

Picture: ★★★★★★

Audio: ★★★★★★

Extras: ★★★★★★

**OVERALL:** ★★★★★★



## Arcade Action

Bigscreen home entertainment isn't just about movies anymore. **Rik Henderson** checks out a videogame vying for time on your home cinema system...



### Quantum Break

Microsoft Studios → Xbox One, PC → £50

Exclusive to Xbox One and Windows 10,

*Quantum Break* is the most cinematic game in many a year. Not only does it features a stellar cast of acting talent, and motion capture and character modelling of the highest quality, it also employs full motion video as an important part of the storytelling.

Many games in the early 1990s adopted a similar form of presentation but not on the scale of *Quantum Break*. This sci-fi action game halts in four places to play 20-minute, non-interactive TV episodes. They can be skipped, but doing so might result in you missing some salient plot developments.

This might put off some hardcore gamers who just want to get back to the action-adventuring, but there are several rewards for settling back and watching the shows. For starters, the cast is led by Shawn Ashmore (Iceman in the *X-Men* movies) as player-controlled character Jack Joyce. Meanwhile, *Game of Thrones'* Aidan Gillen plays lead bad dude Paul Serene.

What's more, you also get to choose the outcome of the TV episodes and some of the events therein. Before each, you are given 50/50 decisions that have wide ramifications on not just what happens in the video segments, but thereafter in the game. It leads to great replay value and intriguing developments.

Episodes are streamed (or downloaded depending on your broadband speed) and presented in 1080p. They look great, too, as does the game. The PC version offers 4K in-game visuals.

Okay, so *Quantum Break's* story may be a tad clichéd in some respects, but it delivers excellent gameplay and set pieces. At its heart it is a third-person shooter, making full use of duck and cover for massive firefights. However, as your character gains time-manipulation abilities, becoming more advanced as the game progresses, you soon discover other ways to dispatch foes than simply raining bullets on them.

In many ways, then, it's a superhero game, apt with Ashmore at the forefront. And even if you do get bogged down with some truly tricky battling, you at least know that an opportunity to sit back and watch the outcome in Hollywood style is on the horizon.



## Brian Pern: The Complete Series 1-3

Dazzler Media → All-region BD  
£25



The brainchild of Rhys Thomas and Simon Day, this uproarious spoof documentary follows Prog Rock legend and 'inventor of world music' Brian Pern (a hilarious mash-up of Peter

Gabriel and Brian Eno) as he charts the history of rock music before setting out to rebuild his career as a solo *artiste*. This double-disc Blu-ray features immaculate 1080i50 encodes of all nine episodes with cleanly defined LPCM 2.0 soundtracks. Brilliant extras include the original web series and a compilation of Brian's music videos and *Top of the Pops* appearances.



## Orange is the New Black: Season Three

Lionsgate → Region B BD  
£40



This third season of the Netflix series about life in a women's prison is short on dramatic weight but has no difficulty finding the funnybone with its tales of corporate takeovers,

religious cults and an illicit trade in used underwear. As with the earlier releases, the 13 episodes are spread across three BD50 platters, with each AVC 1.78:1 1080p encode looking sharp and bright. While the DTS-HD MA 5.1 mixes have an obvious front bias, surrounds are employed for subtle ambient effects. Extras include cast interviews, chat tracks on two episodes and a selection of brief outtakes.



## Culloden & The War Game

BFI → Region B BD & R2 DVD  
£20



This impressive release brings together two controversial drama documentaries Peter Watkins made for the BBC in the 1960s. *Culloden* (1964) explores the infamous battle

through interviews with the participants, while *The War Game's* (1965) shocking depiction of the aftermath of a nuclear attack on the UK upset government officials so much that it was banned from being shown on TV for 20 years. In addition to respectable 1080i50 encodes of the two films, the disc packs in commentaries, home movie location footage and more.





The petrol cap is on the other side, you know...



# Screaming with delight

The relentlessly enjoyable pulp drama hits new heights with its most brutal season yet

## → BANSHEE: THE COMPLETE THIRD SEASON

Across its first two seasons this Cinemax series, about an ex-con (Antony Starr) who assumes the identity of the new sheriff of the small Pennsylvania town of Banshee, has developed from guilty pleasure to a genuine TV favourite. And this explosive third (and, sadly, penultimate) run cements its position as one of the most entertaining shows around.

With former 'big bad' Rabbit now out of the picture, this 10-episode season splits its focus across two major arcs. First up is the return of imposing native American gang leader Chayton Littlestone (Geno Segers), whose quest for revenge against local crime kingpin Kai Proctor (Ulrich Thomsen) unleashes a torrent of misery on the town.

Meanwhile, the show's central quartet of Lucas (Starr), Carrie (Ivana Milicevic), Job (Hoon Lee) and Sugar (Frankie Faison) have set their sights on robbing a decommissioned military base used to store millions of dollars in government funds. Well, that couldn't possibly go wrong. Could it?

As fans will know, it's impossible to talk about *Banshee* without discussion of its action set-pieces – and season three is home to some of the best it's ever served. Whether it's an unbelievably brutal tussle between Nola (Odette Annable) and Burton (Matthew Rauch), the episode-long assault on the Banshee sheriff's office, or the explosive showdown at the military compound, there's a truly cinematic quality to the staging, execution and scale of

*Banshee*'s many, many action scenes. No other TV show (not even *Game of Thrones*) comes close to matching it.

All of this makes it even more of a shame that there's only one more eight-episode season to go until the *Banshee* sheriff's department closes its doors for good.

**Picture:** As with the previous releases, the third season of *Banshee* arrives on Blu-ray with very impressive AV credentials. Limited to a maximum of three episodes per BD50 disc, the 1.78:1-framed 1080p AVC encodes feature stable black levels, accurate colour reproduction and meticulous fine detailing. Indeed, if it wasn't for the presence of some video noise in darker scenes, it would be absolutely perfect.

**Audio:** *Banshee*'s bruising plotlines are backed up on Blu-ray by immersive and dynamic DTS-HD MA 5.1 soundmixes. The use of panning effects and the potency of the LFE is far beyond what you'd typically expect from a TV show, while dialogue is clearly prioritised at all times. Simply excellent.

**Extras:** We've no complaints here, either. Across the four discs you'll find audio commentaries on five of the episodes; eight more *Banshee Origins* prequel videos; the *Banshee Origins Saga* re-edit (with optional commentary track); short *Making of...* featurettes for nine of the episodes; deleted scenes; a breakdown of the camera moves and stunt choreography video for the Nola-Burton fight; and a multi-camera viewing mode for the Camp Genoa heist.



The third season of *Banshee* doesn't skimp on the action



## HCC VERDICT

### *Banshee: The Complete Third Season*

→ HBO Home Entertainment

→ All-region BD → £40

**WE SAY:** A spectacular Blu-ray outing for this visceral and action-packed TV show

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★





# A very important release?

Limited edition boxset brings classic Japanese yakuza film series to the West

## → **OUTLAW GANGSTER VIP: THE COMPLETE COLLECTION**

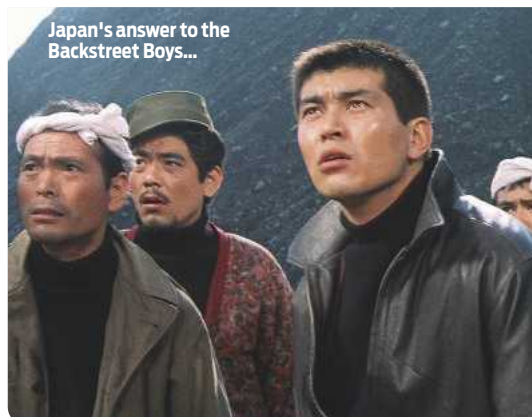
Following closely on from its well-received *Battles Without Honour and Humanity* collection (HCC #256), Arrow lifts the lid on another series of Japanese gangster films with its latest boxset. Produced by Japanese studio Nikkatsu, the *Outlaw Gangster VIP* series follows the exploits of tough-but-honourable yakuza Goro Fujikawa (Tetsuya Watari) and ran to six films released across 1968 and 1969.

Best of the bunch, unsurprisingly, are the first two instalments, *Outlaw: Gangster VIP* and *Outlaw: Gangster VIP 2*, which follow Goro's return home after a few years behind bars, his burgeoning relationship with a smitten young lady (Chieko Matsubara), and an unsuccessful attempt to leave his criminal past behind him.

Sadly, pretty much all of the character and story arcs built up across those first two flicks are ditched for *Outlaw: Heartless*, which sees Goro sent to reclaim a gambling debt from a married couple, only to end up helping them. *Outlaw: Goro the Assassin* steps up the action and offers an upswing in overall quality as our hero once again attempts to go straight, only to get dragged back in.

In the mediocre *Outlaw: Black Dagger*, Goro loses one young lady, falls for another and gets caught up with two yakuza gangs battling over a brothel. Finally, *Outlaw: Kill!* has our anti-hero targeted by yakuza gang members who he stopped from harassing a young girl. It's a tough life.

Even though the *Outlaw Gangster VIP* films are repetitive and single-minded (and the frequent



recasting of the same actors in different roles across the six films can get a bit confusing), there's still an unmistakable energy and charm to this series. Arrow's set is well worth tracking down for fans of Asian action cinema.

**Picture:** The six films are spread across three BD50 discs, with the 2.35:1-framed 1080p encodes sourced from HD masters supplied by Nikkatsu. Image quality is good, if not excellent, with minor speckles and scratches evident across all titles.

**Audio:** Japanese LPCM mono soundtracks are featured. While there are obvious limitations to the source material, they all sound fine with no background hiss or other imperfections.

**Extras:** Each film gets a trailer and stills gallery, while the first also boasts a commentary by genre expert Jasper Sharp and a video essay about the films.

The boxset (limited to just 3,000 copies) also ships with a superb 40-page collection of essays.



## HCC VERDICT

### **Outlaw Gangster VIP: The Complete Collection**

→ Arrow Video → All-region BD & R2 DVD → £35

**WE SAY:** A fine Blu-ray collection for an enjoyable yakuza series that has rarely been seen outside Japan

**Movie:** ★★★★★

**Picture:** ★★★★★

**Audio:** ★★★★★

**Extras:** ★★★★★

**OVERALL:** ★★★★★

## The Assassin

StudioCanal → Region B BD  
£23



Not your typical *wuxia* martial arts movie, Hou Hsiao-Hsien's award-winning period drama stars Shu Qi as a young

woman trained as an assassin and sent to kill a military governor (Chang Chen) – also the cousin she was betrothed to as a child. More concerned with mood than action, *The Assassin* could frustrate some genre fans, but we found it to be a singularly beguiling and unforgettable piece of cinema. This UK Blu-ray sports luscious Full HD video (primarily 1.33:1, although two short scenes are framed at 1.85:1), DTS-HD MA 5.1 audio and four brief but informative featurettes.



## Ip Man 3

Kaleidoscope → All-region BD  
£18



Asian cinema's ongoing attempt at promoting to sainthood real-life Wing Chun grandmaster (and Bruce Lee's tutor)

Ip Man continues apace with this rather pedestrian sequel. While the action scenes are a lot of fun (particularly a scrap set in and around an elevator), the remainder of the film lacks any real spark or energy. As for this UK Blu-ray, while the 2.40:1 1080p visuals are great, the immersive DTS-HD MA 5.1 mix can only hint at the acoustic thrills that were no doubt unleashed by the DTS:X track that featured on the US and Hong Kong hi-def releases.



## Yakuza Apocalypse

Manga Entertainment → Region B BD  
£16



Takashi Miike's latest starts out like some kind of throwback to the 1960s yakuza flicks reviewed above, yet

doesn't take long for it to get seriously weird, as our yakuza hero becomes a vampire and is hunted by a gun-toting Django lookalike. And that's before a cuddly frog monster turns up. It doesn't make a jot of sense, then, but it's a lot of fun and certainly makes an impression on Blu-ray. The Full HD visuals are richly coloured and packed with detail, while the DTS-HD MA 5.1 mix throws in everything including the kitchen sink. A trailer is the only extra.



## The Survivalist

Bulldog Film Distribution  
All-region BD → £20



Closer in tone to *The Road* than *Mad Max: Fury Road*, this post-apocalyptic thriller offers an unforgiving,

bleak and sombre twist on the genre. Set in a near-future where a catastrophic decline in oil production means what's left of humanity is struggling to stay alive, this gripping film explores how people relate to one another in extreme circumstances and the lengths they will go to in order to prosper. This solid hi-def package boasts a vivid 2.40:1 1080p image, moody DTS-HD MA 5.1 sonics, a 21-min *Making of...* and three short films set in the same world as the main feature.





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Orson Welles was a notorious hoarder



# The greatest story ever told?

Warner Bros. celebrates classic film's 75th anniversary in style with this superb new Blu-ray

## → CITIZEN KANE: 75TH ANNIVERSARY EDITION

Following the death of Charles Foster Kane (Orson Welles) – a former newspaper magnate with political aspirations – newsreel reporter Jerry Thompson (William Alland) is dispatched to talk to Kane's friends and associates, in the hope of unravelling the mystery around his final deathbed utterance: 'Rosebud'.

What is there left to say about Orson Welles' 1941 masterpiece? Regularly cited as one of the greatest movies ever made, *Citizen Kane* has been picked over and analysed innumerable times during the 75 years since it first sank at the box office.

But what is it that makes the film so special and worthy of this continuing praise? The answer, unsurprisingly, rests on the shoulder of its director/producer/co-writer/star Orson Welles.

A mere 25 years old when *Citizen Kane* went into production, Welles was afforded total freedom by RKO Pictures and essentially learnt the art of filmmaking on the job. Or perhaps we should say reinvented the art of filmmaking, as the stage and radio actor's inexperience in this media meant that he wasn't limited by traditional studio conventions. Instead, Welles set about pioneering new techniques, such as the breathtaking use of deep focus, and insisting that all of his sets had ceilings in order to allow for his favoured low-angle camera shots.

This technical legacy is only part of the reason why the film continues to be celebrated. *Citizen Kane*



is a fascinating tour through one man's life, an assured study of greed and megalomania bolstered by a phenomenal array of performances. And more than anything else, it's simply a great film, telling a story that grips from start to finish, with intelligence and sophistication.

**Picture:** Until recently the UK rights to *Citizen Kane* lay with Universal Pictures, which previously released its own Blu-ray of the film in 2012 using a restoration sourced from the BFI. Sadly, this presentation simply didn't measure up to the 4K restoration that Warner Bros. had used for a US Blu-ray the year before.

The UK rights to the movie are now in the hands of Warner Bros. and those with Region B players can now check out its 4K restoration for themselves. Truth be told, it's one of the best we've seen from the label. Detail and contrast in the black-and-white full-frame 1080p image is exemplary.

**Audio:** The disc delivers a DTS-HD MA mono mix that is unlikely to get anyone too excited. It's technically sound, though, and does exactly what is asked of it.

**Extras:** Disc-based bonuses take the form of two audio commentaries (by director/Welles fan Peter Bogdanovich and film critic Roger Ebert); newsreel footage from *Citizen Kane*'s 1941 premiere; interviews with actress Ruth Warrick and editor Robert Wise; the trailer; and various galleries of production and post-production material.

Warner Bros' oversized box also houses a 48-page book, a reproduction souvenir programme, art cards and other goodies.

### HCC VERDICT

#### *Citizen Kane: 75th Anniversary Edition*

→ Warner Bros. → All-region BD  
→ £28

**WE SAY:** A magnificent restoration of a remarkable film. No collection should be without this Blu-ray!

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★

## Black Widow

Signal One Entertainment  
Region B BD → £20



A precursor to the more explicit erotic thrillers than would come to prominence in the '90s, this 1987 thriller stars

Theresa Russell as the beautiful woman with a fondness for marrying rich men who die suddenly, and Debra Winger as the investigator hot on her trail. Despite great performances from its leads, the film never quite grips like it should and you're left thinking the script could have done with another rewrite or two. On top of satisfactory 1.85:1 1080p video and LPCM stereo audio, this Blu-ray offers up some useful extras including a chat-track and interview with the screenwriter.



## Only Angels Have Wings

Criterion Collection → Region B BD  
£25



Howard Hawks' 1939 classic stars Cary Grant as the head of a small South American airline

whose pilots risk their lives every day and Jean Arthur as the no-nonsense showgirl who falls in love with him. Heady stuff, bolstered by superb sparring between the two stars and a thrilling mix of aerial footage and special effects. The Criterion Collection's wonderful disc features a sparkling 1.37:1 encode based on a new 4K restoration. A piece about the sound effects used for planes in aviation enthusiast Hawks' films is the pick of the excellent extras.



## Respectable: The Mary Millington Story

Simply Media → R2 DVD  
£20



A household name during the mid-'70s, British sexpot Mary Millington was

something of a rarity, having successfully transitioned from pornography to glamour photography, softcore comedies (most notably, UK box office smash *Come Play with Me*) and running her own sex shops. Recounting Mary's exotic lifestyle and career, Simon Sheridan's documentary is an enthralling watch if, unsurprisingly, not one for those of a more sensitive disposition. Bonus goodies include a chat-track, interviews and restored 1974 'stag' film *Party Pieces*.



## Joy

Twentieth Century Fox → All-region BD  
£25



The story of a woman who invented a mop may not sound like the basis for a great film, but trust us when we

say that director David (American Hustle) O. Russell's latest collaboration with Jennifer Lawrence is a treat thanks to its quirky sense of humour and winning performances. Shot on 35mm, *Joy* arrives on BD with an authentically grainy but pleasingly detailed AVC 1.85:1 Full HD encode. Backing up the strong video presentation is a well-balanced DTS-HD MA 5.1 mix. Also included are a 20-min *Making of...* and an hilariously bad hour-long Q&A.



# Criterion gets its motor running

Counterculture classic returns to Blu-ray, but can this new disc offer a step up in quality?

## → EASY RIDER

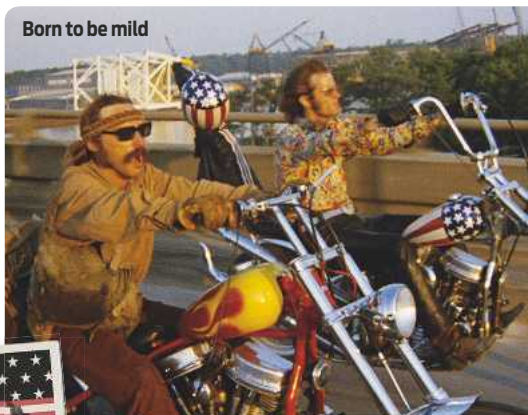
One of the key American films of the 1960s, *Easy Rider* features Dennis Hopper and Peter Fonda as a couple of bikers who use the profits from a drug deal to finance a cross-country trip to New Orleans. Along the way they encounter an alcoholic lawyer (Jack Nicholson) and discover that Southern hospitality isn't always what it's been cracked up to be.

**Picture:** The accompanying booklet may claim that 'this new high-definition transfer was created in 4K resolution... from the original camera negative and the black and white separation masters', but it's hard to spot any significant differences between Criterion's AVC 1.85:1-framed Full HD encode and the one that appeared on Sony Pictures' own 2009 '40th Anniversary' Blu-ray.

While this may dissuade fans thinking about a possible upgrade, the good news is that the original Blu-ray was rather impressive in its own right. Fine object detail and clarity both impress, and there's a wonderful film-like feel to it all. Only the 16mm Mardi Gras footage (Chapter 17) really stands out as being unavoidably inferior in quality.

**Audio:** While audio on the old 2009 release was restricted to a Dolby TrueHD 5.1 remix and Dolby Digital version of the original mono track, Criterion's disc does rather better, providing motorheads with a choice of LPCM 1.0, DTS-HD MA 2.0 and DTS-HD MA 5.1 soundtracks. The first of these will no doubt be as far as most film purists venture, yet we still recommend the 5.1 remix for the improved clarity and range it brings to the film's iconic music soundtrack.

Born to be mild



**Extras:** Carried across from the earlier Blu-ray are a commentary track from actor-writer-director Dennis Hopper and the hour-long *Easy Rider: Shaking the Cage* documentary (created in 1999 for the 30th anniversary DVD).

New to this release are a second commentary (recorded in 1995) featuring Hopper, actor-writer Peter Fonda and production manager Paul Lewis; two minutes of black-and-white interview footage with Hopper and Fonda at the Cannes Film Festival from the May 22, 1969, episode of French TV show *Pour le cinéma*; a 19-min interview with BBS Productions co-founder Steve Blauner; two trailers; and an essay by film critic Matt Zoller Seitz.

Here's hoping that the remaining titles from Criterion's old *America Lost and Found: The BBS Story* Blu-ray boxset (including *Head*, *Five Easy Pieces* and *The Last Picture Show*) join *Easy Rider* in the company's UK lineup in the not too distant future. >



## HCC VERDICT

### Easy Rider

→ Criterion Collection  
→ Region B BD → £25

**WE SAY:** An impressive HD package, even if it's not *that* much of a step up from the original Blu-ray

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

**OVERALL:** ★★★★★





# Less than the sum of its parts

Hollywood's latest take on the famous horror novel has nothing new to say

## → VICTOR FRANKENSTEIN

You wait ages for a revisionist screen version of Mary Shelley's horror novel and two come along within months of each other. But whereas Bernard Rose's *Frankenstein* (reviewed in HCC #258) offered us a modern take on the story told entirely from the creature's point of view, Paul McGuigan's fussy *Victor Frankenstein* takes us back to Victorian London in order to cast its spotlight on Frankenstein's assistant, Igor (Daniel Radcliffe).

Rescued from a circus by the radical scientist (James McAvoy), the former hunchback is cured of his affliction and sets about helping his new mentor in his quest to create life from death. Along the way there's a spot of romance, some terrific set design, a rampaging monkey monster and McAvoy channelling *Rocky Horror*'s Frank-N-Furter, chewing the scenery like his life depended on it.

In far shorter supply, however, is anything remotely frightening or alluring. Even the legendary monster gets pretty short shrift this time around, only turning up in the final act to menace Victor and Igor and give this messy film something of a climax. All told, *Victor Frankenstein* feels like little more than an uneven patchwork of disparate approaches to the source material rather than a cohesive – or even particularly enjoyable – film in its own right.

**Picture:** *Victor Frankenstein* looks rather spiffy on Blu-ray, despite the use of some dubious-looking CG matte shots to bring Victorian London to life. The AVC-encoded 2.40:1 1080p imagery boasts plenty of intricate detailing (check out the rather revolting close-ups of monkey monster Gordon



Victor had to admit that street art wasn't one of his strengths

leading up to his 'birth' in Chapter 11). Colour reproduction is also first-rate, which is pretty handy considering the amount of post-production grading that the film has clearly been subjected to. This is probably behind our only real complaint, which is that blacks often veer towards the impenetrable and in these instances lack shadow detail.

**Audio:** *Victor Frankenstein*'s DTS-HD MA 7.1 mix is bursting with life. Whether it's using the full speaker array to plant you in busy London streets or providing booming bass to accompany each of the creature's footsteps (Chapter 26), it's an expansive and dynamic track that can't help but impress.

**Extras:** *The Making of Victor Frankenstein* is a half-hour documentary broken up into seven short featurettes (thankfully there is a Play All option). Also included on the Blu-ray are four deleted scenes, three image galleries (*Production Design*, *Production Photography* and *Behind-the-Scenes*) and a trailer.



## HCC VERDICT

### Victor Frankenstein

→ Twentieth Century Fox

→ All-region BD → £25

**WE SAY:** It may look and sound great in HD, but that doesn't stop the film from being a bit lifeless

Movie: ★★☆☆☆

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★☆☆☆

## Ghoulies/Ghoulies II

101 Films → All-region BD  
£13 each



Mainly remembered as one of the flood of *Gremlins* cash-ins that surfaced in the 1980s, *Ghoulies* is in fact a fun little black magic shocker that just happens to have a few rubber

monsters hanging around its periphery. In fact, it's not until *Ghoulies II* that the titular demons are put front-and-centre as they cause chaos at a fairground. Both encodes exhibit minor print damage but still hold up fairly well – with the second film looking particularly sharp and detailed. The sequel is devoid of extras; the original boasts a video intro and refreshingly honest commentary from director Luca Bercovici.



## Burial Ground

88 Films → Region B BD  
£20



A plague of flesh-eating zombies descend on the guests at an isolated mansion in Andrea Bianchi's 1981 Italian

horror flick. There's possibly a subtext about the proletariat rising up to attack the upper classes buried in here, but really all the film cares about is pitting putty-faced ghouls against a bunch of hedonistic holidaymakers, something it does with plenty of gusto, if not a lot of smarts or talent. Restored from the original 16mm negatives, it looks surprisingly good on Blu-ray, while enjoyable extras include a commentary and amusing video essay about Bianchi.



## Night of the Living Deb

FrightFest Presents/Icon → R2 DVD  
£15



Thanks to the success of *Shaun of the Dead*, the zom-com surely ranks just behind the found footage flick

as the most played-out approach to the horror genre. This disarmingly sweet and funny effort proves that there's still some life in it too – all you need is a splash of creativity, some good zombie gags and (most importantly) likeable lead characters. This DVD release packs an attractive anamorphic 2:1 transfer and sprightly DD5.1 mix. There's also a lively cast and crew commentary and a half-hour *Making of...* doc.





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Collecting...

# Sylvester Stallone

*Creed* is the latest success of the actor/writer/director's forty-year career. Here **Team HCC** picks out some other Sly goodies on Blu-ray and DVD that fans should add to their collection

*Rocky*: cinematic heavyweight



## ROCKY

The champion of underdog sports movies? Who'd argue? And this triumphant 1976 flick retains a gritty edge somewhat missing from its numerous sequels, with Stallone's Oscar-nominated script placing the chicken-chasing, egg-drinking montages and Bill Conti's memorable *Gonna Fly Now* original song amidst a less glitzy tale of a loanshark thug struggling to redeem himself. No-nonsense, heart-warming stuff.

**Get it:** There have been various releases for *Rocky* since the advent of Blu-ray – the one to spar with is the 'remastered' version birthed in 2014, as this improves image quality over the original 2006 MPEG-2 release. You'll also find this platter in the *Heavyweight Collection* boxset that adds the five follow-up movies.

TOP PICK



## FIRST BLOOD

Or *Rambo I* if you prefer – this superb anti-war thriller introduced the world to Stallone's on-the-edge veteran, indicting the US Army over its Vietnam failings in the process. A little rough around the edges, but helmer Ted Kotcheff finds beauty in the Pacific Northwest locations and Stallone nails the part that he co-created.

**Get it:** Don't expect visual fireworks, or sonic immersion from the remixed 5.1 track, on StudioCanal's BD. Or much in the way of extras, either.



## DEATH RACE 2000

B-movie brilliance from producer Roger Corman that gave Stallone his first major role as murderous race driver Machine Gun Joe, rival to David Carradine's Frankenstein in a televised trans-American dash where points are awarded for knocking over bystanders. It's the kind of outlandish, censor-baiting entertainment that Corman is famous for – like *The Cannonball Run* only much more violent.

**Get it:** Put out on Region A Blu-ray in the US by Shout Factory under the Corman's Cult Classics banner. Imagery is suitably grimy.



## TANGO & CASH

This film couldn't be more '80s if the Blu-ray came dressed in a pastel suit with the sleeves rolled up, yet while clearly a product of its time, there's fun to be had seeing Stallone team up with Kurt Russell as LA cops fighting (literally) to clear their names after being framed for murder. At one point they drive a monster truck through a building, which tells you all you need to know.

**Get it:** Available on a barebones Region B platter with TrueHD 5.1 audio. Don't expect a UHD release any time soon.



## CLIFFHANGER

Sly's mountain man Gabe Walker uses his outdoor skills to outwit a gang of thieves in this snowy genre hit from 1993. Director Renny Harlin crafts some vertigo-inducing climbing sequences, and the leading man looks grateful to be back in the action saddle after poorly-received forays into comedy with *Oscar* and *Stop or My Mom Will Shoot*.

**Get it:** If you want this in HD, then grab Sony's US Blu-ray, as when Optimum released it in the UK it managed to get the surround channels reversed. Oops.





## COP LAND

Corrupt cop drama giving Stallone top billing alongside Robert De Niro, Ray Liotta and Harvey Keitel. For his role as a partially-deaf, shuffling smalltown sheriff, Sly famously piled on 40lbs and delivered a performance far removed from his typical macho-man persona. Hyped as 'serious acting', which degrades his turns in *Rocky* and *First Blood*, actually.

**Get it:** This mid-budget movie was never likely to get the deluxe BD treatment, but at least Lionsgate's HD platter offers the 116-minute director's cut, chat track and deleted scenes. A Zavvi Steelbook edition is available, too.



## DEMOLITION MAN

The actor starred in two futuristic actioners in the 1990s – this time-switching caper is much better than the misfiring comic book adaptation *Judge Dredd*. Buoyed by Wesley Snipes playing a psychopath in dungarees, plus Sandra Bullock's cop partner, *Demolition Man* is high-concept fun with a streak of humour.

**Get it:** Available as a standalone release or as part of a budget boxset that also features *Tango & Cash*, *Assassins*, *The Specialist* and *Cobra*. Now that sounds like quite a movie marathon.



## ANTZ

DreamWorks' first CG animation features the Italian Stallion providing the voice (and beefed-up likeness) of one of its ant heroes. Easy comparisons can be made with Pixar's *A Bug's Life* (both were released in 1998) but this has enough about it – particularly Woody Allen as introverted ant Z – to stand up on its own.

**Get it:** Want this on BD? Forget it. For unknown reasons, *Antz* has only surfaced on DVD (and Laserdisc, actually). So it's standard-def or nothing.



## RAMBO

An impressively bombastic return for Stallone's justice-dealing vet, two decades on from *Rambo III*. This Burma-set bullet-fest paints its plot with broad strokes – its best considered as a backdrop to numerous sequences of our conflicted hero blowing things up and mowing down bad guys.

**Get it:** An example of where importing region-free BDs is worthwhile. The UK release offers a 5.1 TrueHD mix – the US disc delivers 7.1 DTS-HD MA. Also, there's an Extended Cut BD edition in the US, but this omits the commentary track. To be honest, it's all a bit of a mess.



## THE EXPENDABLES

Stallone's throwback to the '80s action movies that made him a global star reached enough nostalgic highs to make it a surprise smash hit and spawn two bigger (but not better) sequels. Budget constraints perhaps mean it's not the destruction-filled epic it could have been, but from its fan-favourite cast and Stallone's straightforward plotting to the chance to see Jason Statham and Jet Li doing battle with UK martial arts legend Gary Daniels, there's plenty here for genre fans to chew over.

**Get it:** The 2012 Extended Edition UK BD sees Stallone tweak the movie (to good effect). It also includes the 91-minute *Inferno...* doc in HD – it was previously found in SD on the 2010 'Collector's Set'.



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Issue No.248



Issue No.249



Issue No.250



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# SELECT

→ **GEAR GUIDE** **TELEVISIONS** From entry-level 40in LEDs to flagship 4K monsters  
**BLU-RAY PLAYERS** Which deck rules the roost? **PROJECTORS** It's time to blow up your video!  
**AV RECEIVERS** 5.1, 7.1, 9.2 – we've got all the options covered **SPEAKERS** Killer surround sound setups  
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## HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★★☆☆
Dire	★★★☆☆

All prices quoted are approximate and may have changed



## TOP 10 Televisions

- 1**  **NEW ENTRY**  
**Panasonic TX-65DX902B → £3,300** ★★★★★  
 This HDR-capable 65-incher wears its Ultra HD Premium certification with pride, and employs a full-array backlight to take control of its impressive luminance talents. Imagery is excellent; overall styling is appealing too. *HCC #259*
- 2**  **Panasonic TX-65CZ952B → £7,300** ★★★★★  
 Price tag and curved panel will put some off, but this OLED delivers on its high-end promise with show-stopping black levels and masterful colour handling. *HCC #256*
- 3**  **Samsung UE65JS9500 → £4,000** ★★★★★  
 Not cheap, but that's the only real downer about Samsung's range-topper. The super-bright 4K panel is ready for incoming HDR/UHD BD content; performance is excellent. *HCC #246*
- 4**  **Sony KD-75X9405C → £5,000** ★★★★★  
 This giant TV offers an irresistible blend of Ultra HD visuals and bassy, immersive audio made possible by the appealing Wedge design. Direct LED backlight provides nuanced contrast. *HCC #250*
- 5**  **LG 65EF950V → £3,700** ★★★★★  
 An OLED TV with a flat rather than curved screen has instant home cinema appeal. Typically involving UHD performance, but not without some uniformity issues. *HCC #256*
- 6**  **Samsung UE55JS8500 → £1,700** ★★★★★  
 While shorn of some of the features of the JS9500 flagship (most notably the full-spec One Connect box), this step-down HDR set still packs a picture-quality punch. *HCC #251*
- 7**  **Philips 40PFT6510 → £480** ★★★★★  
 This Ambilight-toting, Android smart TV shows that regular Full HD imagery can still impress, helped by Philips' efficient processing and direct LED illumination. *HCC #253*
- 8**  **Panasonic TX-50CX680 → £650** ★★★★★  
 Impressive and affordable Ultra HD TV with a slinky desktop stand. Highlights include its assured upscaling, authentic colours and foolproof user experience. *HCC #257*
- 9**  **Hisense 65XT910 → £2,300** ★★★★★  
 The Chinese marque throws down the UHD/HDR gauntlet to its better-known rivals with this big, well-priced, high-spec TV. Bright and clear images, but short on motion subtlety. *#257*
- 10**  **Philips 55PUS8601 → £1,700** ★★★★★  
 The detachable side-mounted speakers, slim bezel and Ambilight make this upper midrange 4K set stand out. Imagery is bright and colourful, but black depth is average. *HCC #258*

## TECH INFO: TELEVISIONS



**What? No plasma?:** The TV market is now dominated by LED-lit LCD screens. Manufacture and sale of plasma display panels (PDPs), which previously came into play above 42in, has ceased. With LED comes newer technologies. 4K models with a native resolution of 3,840 x 2,160 should at least be on your audition list if you're thinking of a new display; curved models are a consideration if you want to impress the neighbours. Look out for sets claiming support for HDR content, which is part of the forthcoming UHD Blu-ray spec.



**Active or Passive:** At the beginning of the 3D era, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. Some brands offer both Passive and Active models, depending on the panel used. Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on. The tech is still being worked on, though.

## TOP 5 Blu-ray movies

**Sicario**

Tense, tight 'war on drugs' thriller from rising star Denis Villeneuve with a classy cast and an addictive, precise Dolby Atmos soundmix. The Blu-ray encode relishes Roger Deakins' smart cinematography, too.

★★★★★

**Crimson Peak**

Director Guillermo del Toro cooks up a spooky Gothic romance with the aid of some sensational set design and a spine-tingling DTS:X mix that proves a good intro to the format. Plenty of bonus features.

★★★★★

**The Martian**

Matt Damon stars in this enjoyably science-tastic Red Planet adventure. Sound and picture both excel on Warner's Blu-ray, but we expect a Special Edition with a longer cut and more extras later this year.

★★★★★

**Bridge of Spies**

Enthralling thriller from Steven Spielberg packed with first-rate performances and keen attention to detail. The BD is an AV stunner, too, although it misses a trick when it comes to extra features.

★★★★★

**The Hunger Games - Mockingjay: Part 2 3D**

The Young Adult franchise goes out on a high, and this BD packs a roof-raising Dolby Atmos mix, sharp HD encode (the 3D is a bit dull...) and a monster selection of bonus bits.

★★★★★

## TOP 10 Blu-ray players

- 1**  **Panasonic DMP-UB900** → £600 ★★★★★  
 Boom! The Ultra HD Blu-ray format gets an inspiring debut in Panasonic's multi-talented deck that offers welcome user tweaks and a sterling picture performance. Smart skills include 4K-enabled VOD apps. *HCC #259*
- 2**  **Oppo BDP-103D** → £600 ★★★★★  
 This deck adds Darbee Visual Presence processing to the already excellent AV skills of its BDP-103EU predecessor. Superb construction, usability and features/connections. *HCC #228*
- 3**  **Pioneer BDP-LX88** → £1,100 ★★★★★  
 The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. *HCC #246*
- 4**  **Oppo BDP-105D** → £1,100 ★★★★★  
 This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC #234*
- 5**  **Arcam FMJ UDP411** → £1,200 ★★★★★  
 Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. *HCC #244*
- 6**  **Sony BDP-S7200** → £180 ★★★★★  
 A Sony deck without the curious angular design, the BDP-S7200 offers SACD support, hi-res audio streaming and 4K upscaling that's worth investigation. Not too pricey, either. *HCC #239*
- 7**  **Cambridge Audio CXU** → £900 ★★★★★  
 Styled to match the brand's other CX components, this universal deck matches its audio and video chops with plenty of features, including Darbee and HDMI switching. *HCC #253*
- 8**  **Pioneer BDP-LX58** → £500 ★★★★★  
 Short on 'net content and a bit slow in use, but these are minor complaints – this model (which ranks below the BDP-LX88) is a gorgeous, thoroughbred Blu-ray performer. *HCC #250*
- 9**  **Panasonic DMP-BDT700** → £400 ★★★★★  
 Claiming THX-certified 4K upscaling and HDMI 2.0 60p passthrough, this mid-range deck from Panasonic is a good partner for a modern display. Great audio option, too. *HCC #237*
- 10**  **Samsung BD-J7500** → £150 ★★★★★  
 This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, Smart features and solid AV chops. *HCC #247*

### TECH INFO: BLU-RAY PLAYERS

**Matching your deck to your AV receiver:** Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D/4K/HDR output signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

**What about the PlayStation?:** Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £150 PS3 Super Slim makes a decent choice – especially if you like playing games. Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The more expensive PS4 is a much better gaming machine, and now available in a 1TB version.



### DEMO DELIGHT

**Spectre:** Director Sam Mendes returned to film for the latest Bond adventure having lensed *Skyfall* digitally. Sony's Blu-ray offers a crisp, beautiful yet filmic encode, with a refined grain structure. The opening Day of the Dead scene is a riot of colour.

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Photo courtesy of Gary J. Fernandez



## TOP 10 Projectors

**Sony VPL-VW520ES** → £8,800

★★★★★

The top dog in Sony's domestic SXRD projector range, this couples native 4K optics with HDR compatibility for a state-of-the-art performance. Capable of jaw-dropping imagery and offers plenty of install flexibility. *HCC #254*

**Epson EH-LS10000** → £6,000 ★★★★★

Debuting a laser light source (30,000 hours) and Epson's 4K enhancement processing, this large chassis model is a cinematic triumph. Essential audition for a dedicated room. *HCC #247*

**JVC DLA-X7000** → £5,700 ★★★★★

With contrast and brightness improvements over the more affordable DLA-X5000, this is a great bigscreen option, although its SDR performance impresses more than HDR. *HCC #259*

**Epson EH-TW7200** → £1,800 ★★★★★

Priced to appeal to those unable to dabble in the £3,000 market, Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. *HCC #232*

**Sony VPL-HW65ES** → £2,800 ★★★★★

Bright, flexible Full HD projector with impressive image chops and decent calibration options. But you'll need to ask yourself if you really want a 4K model instead.... *HCC #258*

**Optoma HD50** → £1,000 ★★★★★

With a retweaked user interface that improves upon previous Optoma light-cannons, the 12V-trigger-toting HD50 is a brilliant budget buy. *HCC #239*

**JVC DLA-X5000** → £4,000 ★★★★★

Fourth-gen eShift projector marries its pixel-shifting talents with a contrasty performance, HDR support and HDMI 2.0a. Not the smoothest with motion, and price tag is considerable. *HCC #257*

**BenQ W2000** → £800 ★★★★★

Average black-level performance limits this model's all-round appeal, but elsewhere this Full HD DLP budget PJ catches the eye with its calibration options and detailed visuals. *HCC #257*

**Optoma HD91+** → £3,500 ★★★★★

This LED/DLP Optoma claims a 20,000-hour lamp life. Setup features include a 1.9x zoom and image quality is generally excellent. Close in price to JVC's 4K eShift line, however. *HCC #252*

**Acer V7500** → £630 ★★★★★

A 1.4x zoom, 3D support (glasses are optional), plus colour, gamma and white balance controls are the feature highs here. Sharp Full HD visuals with reasonable contrast. *HCC #258*

## TECH INFO: PROJECTORS



**Installation:** Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

**Throw distance:** Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

**Throw ratio:** Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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## TOP 10 Speakers


- 


**1 Monitor Audio Gold 300AV → £7,150 ★★★★★**  
MA revamps its Gold Series and we pay serious attention. This big-ticket package excels across the frequency range, offers exquisite design and packs setup flexibility via the dipole/monopole FX surrounds. *HCC #251*
- 


**2 Q Acoustics 3000 5.1 Cinema Pack → £700 ★★★★★**  
A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer impressive audio for the money. *HCC #247*
- 


**3 XTZ Cinema Series 5.1.4 → £3,700 ★★★★★**  
Spectacular dynamics, gut-thumping bass and a sense of scale that most systems at this price only dream of – XTZ's 3D audio-ready setup is an easy recommendation. *HCC #259*
- 


**4 KEF R Series 7.1 → £6,500 ★★★★★**  
A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. *HCC #217*
- 

**5 Monitor Audio Bronze B5 AV → £1,500 ★★★★★**  
Like their Gold siblings, these feature switchable surround speakers and MA's C-CAM drivers. Smaller in stature and output, but eminently more affordable. *HCC #254*
- 

**6 Wharfedale Diamond 220 HCP → £850 ★★★★★**  
This package offers a lot for less than a grand – two-way surrounds, a potent three-driver centre channel and agile subwoofer. Great movie sound and excellent build. *HCC #248*
- 

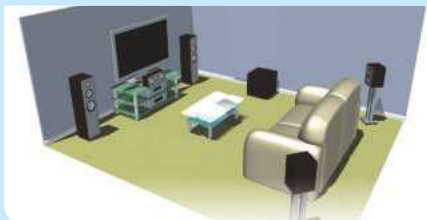
**7 Tannoy Revolution XTF 5.0 → £2,000 ★★★★★**  
The entry-level for Tannoy's Dual Concentric driver tech, the XTFs have real all-round appeal – the sound is both energetic and balanced. You'll need to add a sub, of course. *HCC #258*
- 

**8 Q Acoustics Concept 5.1 Cinema Pack → £1,750 ★★★★★**  
Step-up Q Acoustics offering with handsome floorstanders joined by standmount surrounds employing the Concept Gelcore construction. Classy, consistently neutral performance. *HCC #257*
- 

**9 Tannoy HTS-101XP → £700 ★★★★★**  
A great sub/sat option. Tannoy's coaxial drivers excel at treble details; the new dual-driver subwoofer delivers the bottom end with gusto. Decent styling, too. *HCC #252*
- 

**10 JBL Arena 5.1 → £850 ★★★★★**  
With horn-loaded tweeters derived from JBL's costlier packages, this floorstanding set doesn't skimp on impactful, dynamic thrills. Subwoofer is pretty basic. Solid sub-£1,000 array. *HCC #256*

## TECH INFO: SPEAKERS



**Centre speaker:** Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

**Front speakers:** Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

**Subwoofer:** Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

**Surrounds:** Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

## DEMO DELIGHT

**Mad Max: Fury Road:** This outback actioner comes complete with an inventive, detail-packed Dolby Atmos soundtrack that has to be heard to be believed. Music and atmospheric effects are regularly shunted into the height channels, the subwoofer puts in a serious shift, and object placement is remarkable. Play it loud!

OPPO<sup>®</sup>  
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## TOP 10 AV Receivers/AV Processors

**Onkyo TX-NR3030** → £2,500

★★★★★

The big daddy of Atmos AVRs, this 11-channel design enables four height speakers to be added to an existing 7.1 array with ease. Lithe on its feet and with exemplary steering, this is multichannel audio at its best. *HCC #245*

**Denon AVR-X7200WA** → £2,500 ★★★★★

Now upgraded to DTS:X, and sporting HDCP 2.2 support, this Atmos AVR is as futureproofed as it gets. Only a nine-channel design, though. *HCC #248*

**Arcam AVR850** → £4,200 ★★★★★

High-end seven-channel AVR marrying Class G amplification and Atmos (and future DTS:X) support with talented Dirac Live Room EQ. 11-channel pre-outs for full-fat setups. *HCC #257*

**Marantz AV8802A** → £3,350 ★★★★★

This 11.2-channel next-gen processor (Atmos, DTS-X and Auro-3D) is an obvious upgrade for a high-performance separates system. Luxuriant, natural sound quality. *HCC #253*

**Denon AVR-X1200W** → £300 ★★★★★

Excellent budget seven-channel option, packing 3D audio support, 4K/HDR-capable HDMI inputs and a lively, neutral audio performance. Good-looking and easy to use, too. *HCC #259*

**Denon AVR-X6200W** → £1,800 ★★★★★

Less powerful than the X7200WA, but less expensive too, and this nine-channel next-gen AVR proves wonderfully adept at digging out the details and thunder in your Blu-rays. *HCC #258*

**Pioneer SC-LX89** → £2,100 ★★★★★

Controlled but lively-sounding 9.2-channel AVR (Atmos, DTS:X) that's packed with tweaks. MCACC calibration impresses, but the overall complexity here could be a turn off. *HCC #256*

**Yamaha RX-A550** → £550 ★★★★★

Only a 5.1-channel model – and subsequently not endowed with Atmos/DTS:X chops – the RX-A550 impresses with its audio performance, design and networking features. *HCC #252*

**Cambridge Audio CXR120** → £1,500 ★★★★★

This Brit-designed 7.2-channel receiver focuses on performance and ignores object-based audio and built-in Bluetooth. Sound quality is assured and construction is monstrous. *HCC #251*

**Onkyo TX-RZ800** → £1,050 ★★★★★

Feature-packed (DTS:X, HDCP 2.2) and sporting a new, clean design, Onkyo's mid-priced nine-channel AVR is easy to use and sounds sprightly, if a little short on aggression. *HCC #253*

## TECH INFO: AV RECEIVERS



**Tackling new heights:** A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha. This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and DTS:X. Most AVR brands have pledged support for the latter; software is beginning to arrive.

**How much power?:** Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

## TOP 5 Bonus features

**Kingsman: The Secret Service Revealed**

A lengthy (92-minute) doc that is a must-watch for fans of the kinetic British comic book adaption, this looks back at the movie's origins and delves deep into its production.

★★★★★

**The Science of Interstellar**

From black holes to the search for planets that can support life, this engrossing 50-minute doc (narrated by Matthew McConaughey) explores the scientific rationale that lies at the heart of the recent sci-fi epic.

★★★★★

**Pawns No More: Making The Hunger Games: Mockingjay – Part 2**

Who expected this action flick to be accompanied by an epic 141-minute eight-part doc that covers practically everything about the film's production?

★★★★★

**The Life, Legacy and Legend of Don Borchers**

Brilliant documentary addition to the *Children of the Corn* Trilogy boxset focusing on the career of producer Don Borchers. Stuffed with insight, humour and Hollywood tales.

★★★★★

**Production Diaries**

A bumper collection of featurettes accompanying *Bad Boys II* on BD. Image quality may be standard-def, but there's plenty of input here from Bay and insight into his madcap filmmaking world.

★★★★★

## TOP 10 Subwoofers

- 

**SVS SB-2000** → £600 ★★★★★  
This follow up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbibes your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. *HCC #233*
- 

**REL 212SE** → £2,750 ★★★★★  
Lush design joins engineering nous in this premium sub with two active 12in drivers supported by a pair of passive radiators. Loud, deep and impactful, your BDs are in safe hands. *HCC #246*
- 

**JL Audio Fathom F212** → £5,900 ★★★★★  
The US brand arrives in the UK in style – this 2 x 12in, 3,000W brute not only looks gorgeous, it's capable of a mindblowing performance. Got a big room? Get one of these! *HCC #214*
- 

**REL S-5** → £1,600 ★★★★★  
A step up from REL's affordable T series, this 12in model is large and weighty, with a performance level to match. Fast and tight but capable of dropping very low indeed. *HCC #234*
- 

**Bowers & Wilkins PVID** → £1,200 ★★★★★  
One of the coolest-looking subs on the planet, B&W's PVID uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. *HCC #212*
- 

**Eclipse TD520SW** → £3,000 ★★★★★  
This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. *HCC #249*
- 

**BK Electronics P12-300SB-DF** → £475 ★★★★★  
Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. *HCC #247*
- 

**JL Audio E-Sub e112** → £2,050 ★★★★★  
This 12in, 1,500W model from JL Audio's 'entry-level' line seems pricey, but its performance, design and tuning options make the investment oh-so worthwhile. *HCC #240*
- 

**SVS PB-2000** → £750 ★★★★★  
The ported sibling to the SB-2000, this woofer uses the same driver and amp arrangement, but in a far larger cabinet. Bass goes deeper, but not at the expense of finesse. *HCC #243*
- 

**Artison Nano 1** → £800 ★★★★★  
Artison's media room-friendly woofer tucks twin 6.5in bass drivers and a 300W amp into its compact frame. Bass extension isn't the deepest, but this is tight, fast and heaps of fun. *HCC #253*

## TECH INFO: SPEAKERS



**Why use more than one sub?:** Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

## DEMO DELIGHT

**San Andreas:** This brilliantly over-the-top SFX-heavy disaster flick magicks up a scenario where both downtown Los Angeles and San Francisco (not to mention the Hoover Dam) are hit by mega earthquakes, and its Atmos mix is subsequently loaded with LFE. Buildings topple and pavements tear apart with real fear-inducing weight, keeping your sub on its toes for much of the 110-minute running time.

## TOP 5 Console games



**Tom Clancy's The Division**  
Ubisoft's long-gestating online multiplayer RPG/shooter proves worth the wait, courtesy of its well-realised future New York environment, varied gameplay (including solo missions) and grin-inducing weaponry. ★★★★★



**LEGO Marvel Avengers**  
The best platform/puzzler yet from the TT Games LEGO... franchise. Packed with your favourite Marvel characters, it takes plot queues from the blockbuster movies. Smart, funny and offers plenty of game-time. ★★★★★



**Batman Arkham Knight**  
The concluding part of Rocksteady's trilogy gives players an immense world to explore – everything here is bigger and better than before – and the moody, cinematic visuals are a treat for your display. ★★★★★



**Metal Gear Solid V: The Phantom Pain**  
Our pick for 'Game of the Year' in 2015, this open-world stealth/actioner dazzles with its breadth, interaction, flexibility and lush visuals. A fitting end to the legendary series. ★★★★★



**Transformers: Devastation**  
Forget the Michael Bay movie series, this action-packed Transformers game harks back to the 1980s 'toon series. As such, it looks lush, with its cel-shaded style igniting childhood memories. And it plays great too. ★★★★★



## TOP 10 Accessories

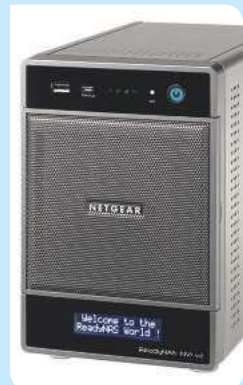
- 1 KEF R50 → £600 ★★★★★**  
 KEF's Dolby Atmos-enabled reflective modules are a smart choice for anyone looking to beef up their speaker system. Using the company's Uni-Q point source drivers pays real dividends, enabling full-range sonics that reach deep into your cinema room. Styling and build quality are first rate. £600 gets you a pair – you'll soon want four... *HCC #252*
- 2 Amazon Fire TV 4K → £80 ★★★★★**  
 Amazon reboots its media player to include 4K video prowess, greater storage capability and a souped-up engine. The result is an intuitive add-on that's ideal for 4K TV owners. *HCC #254*
- 3 Samsung WAM7500 → £500 ★★★★★**  
 Also known as the R7, this addition to Samsung's multiroom system delivers authentic omnidirectional sonics via its super-stylish oval-shaped enclosure. Expensive, but excellent. *HCC #253*
- 4 KEF Muo → £300 ★★★★★**  
 Portable Bluetooth speaker that's a cut above. KEF's sonic knowhow results in a punchy, dynamic presentation that cherishes lossless rips. Excellent build quality. *HCC #256*
- 5 Asus RT-AC87U → £160 ★★★★★**  
 A high-spec router can help you get the best from home media streaming – this feature-laden dual-band Asus impresses with speed and range and customisation options. *HCC #259*
- 6 QNAP HS-251 → £300 ★★★★★**  
 Adding HDMI connectivity to a NAS device is surprisingly useful – and this slim-line model from QNAP is styled to grace your living room. Flawless media playback and responsive. *HCC #248*
- 7 Now TV → £15 ★★★★★**  
 Among the new tricks of this second iteration of Sky's compact streamer are 1080p output, microSD and USB inputs and a faster processor. And it's still ridiculously affordable. *HCC #253*
- 8 Pioneer XDP-100R → £500 ★★★★★**  
 Android-based hi-res audio/video player that's ready for MQA files and sounds smooth and detailed. The 720 x 1,280 screen (4.7in) is up to the job with VOD apps and games. *HCC #256*
- 9 Sony SRS-X11 → £60 ★★★★★**  
 An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. *HCC #249*
- 10 Logitech Harmony Elite → £270 ★★★★★**  
 Flexible and relatively easy to set up, this all-in-one remote package combines touchscreen handset and hub with smart device app. Worthwhile if you have a stacked kit rack. *HCC #256*

## TECH INFO: MEDIA PLAYERS



**What about my TV?:** Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Philips, Hisense, etc) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

**Storage:** You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

## TOP 5 Blu-ray/DVD boxsets

**American Horror Project: Volume One**

First in a planned series of boxsets focusing on forgotten US fright flicks, this collects a trio of solid '70s horrors (with variable image quality) and bundles them with plenty of extras.

★★★★★

**Doctor Who: The Complete Ninth Series**

Peter Capaldi's sophomore year as the Time Lord packs 12 superb episodes plus the 2014/2015 Christmas specials. This BD set carries 1080i/50 encodes and DTS-HD 5.1 soundmixes.

★★★★★

**Mr. Robot: Season One**

Brilliant tech-infused TV thriller/drama series that already has us psyched about Season Two. Music-minded DTS-HD Master Audio 5.1 mixes grace this boxset's ten Full HD encodes. Not many extras, though.

★★★★★

**Game of Thrones: The Complete Fifth Season**

HBO introduces Dolby Atmos soundmixes as standard to its latest *Game of Thrones* HD release. The result is a gripping fantasy show blessed with excellent AV credentials.

★★★★★

**Better Call Saul: Season One**

This spin-off from the award-winning *Breaking Bad* stands up well on its own, and this extras-packed BD release features superb 1080p visuals and DTS-HD 5.1 mixes.

★★★★★

## TOP 10 Soundbars & Soundbases



### Yamaha YSP5600SW

→£1,900 ★★★★★

With its 46 drivers (including upfiring) this premium 'bar delivers precisely-steered and immersive audio, even of the Atmos variety. Potent wireless sub and 4K-capable HDMI switching sweeten the high-end deal. *HCC #254*



### Canton DM100 →£530 ★★★★★

An assured 2.1 performance delivered by an eight-strong array of separate tweeters, mid-range and bass drivers in a 1m enclosure. Suited to the large screens of today's 4K world. *HCC #253*



### Sony HT-XT3 →£450 ★★★★★

A great-sounding soundbase blessed with HDMI connectivity, HDCP 2.2, Wi-Fi, Bluetooth, multiroom support, screen mirroring and app control. There's little to complain about. *HCC #250*



### Cambridge Audio TV5 →£300 ★★★★★

Twin 6.5in bass drivers lend the TV5's sound some decent low-end heft, but not to the detriment of the rest of the soundstage. An enjoyable, balanced listen. Easy to use. *HCC #245*



### Q Acoustics Media 4 →£330 ★★★★★

A no-nonsense offering from the speaker specialist, which ignores HDMI inputs and daft DSP modes in favour of creating a nuanced, solid 2.1 soundscape. *HCC #238*



### Sony HT-RT5 →£500 ★★★★★

Sony joins the growing 'soundbar with wireless surrounds' market with an enjoyable debut that packs some worthwhile DSP modes and plenty of media-savvy functionality. *HCC #257*



### DALI Kubik One →£800 ★★★★★

The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. *HCC #248*



### Yamaha YSP-1600 →£500 ★★★★★

With support for Yamaha's MusicCast multiroom and a tasty low-end even without a subwoofer, this 'bar is a solid one-box solution. Single HDMI in/out, old-fashioned UI. *HCC #258*



### Philips Fidelio B5 →£600 ★★★★★

Detachable battery-powered side speakers let you enjoy both genuine surround sound and straight 2.1 (there's a wireless sub). And each speaker offers Bluetooth hookup. Innovative. *HCC #249*



### Orbitsound A70 →£500 ★★★★★

Not overly specified – there's no HDMI, for instance – but this elegant 'bar/sub combi just about justifies its price tag with an enveloping and very well-balanced performance. *HCC #251*

## TECH INFO: TV PLATFORMS



### TV addicts – go free, or pay-to-view?:

The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

**Sky+HD:** The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. Hardware options include the 2TB dual-tuner PVR. An upgrade, dubbed Sky Q, is arriving soon, and will offer 4K support among its tricks.

**Virgin Media TiVo:** The cable giant offers a three-tuner PVR (1TB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

**Freeview:** Common option when it comes to TVs and STBs. Freeview offers 13 HD channels plus SD and radio. Freeview Play adds IPTV integration to the EPG – and you'll find it on some Panasonic TVs.

**Freesat:** Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered via a dish but without a subs cost. Budget-priced STBs are available.

**YouView:** This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

## TOP 5 Back-catalogue Blu-rays



### Bad Boys/Bad Boys II: 20th Anniversary Edition

The first time Michael Bay's brash sequel has been available on Blu (joined by the original). It arrives with an eye-popping HD image, zippy DTS-HD 5.1 mix and lots of archival extras.

★★★★★



### The Tragedy of Macbeth

Roman Polanski's brutal 1971 Shakespeare adaptation is chosen as one of the first Criterion Collection Blu-rays to hit the UK. A new hour-long doc is the pick of the extra features. Audio is 3.0-flavoured.

★★★★★



### A Touch of Zen

A new addition to Eureka's Masters of Cinema label, this double-disc set (with an extras-packed DVD) delivers a sensational hi-def presentation of King Hu's 1971 three-hour-plus wuxia masterpiece.

★★★★★



### The Third Man

StudioCanal takes a second stab at releasing this celebrated 1949 Brit-noir starring Orson Welles, rewarding buyers with an excellent image taken from a 4K restoration plus some new documentary material.

★★★★★



### Beyond the Valley of the Dolls

20th Century Fox and Russ Meyer sounds like an odd pairing, but the result was this surrealist, music-laden oddity, now given lavish BD treatment – the 2K restoration is stunning.

★★★★★



# hi-fi news

THE HOME OF REAL HI-FI  
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## TOP 5 PVRs



### Virgin Media TiVo, £subscription

This triple-tuner PVR offers ultimate recording flexibility, useful features – you can undelete deleted shows! – and awesome TiVo functionality. A no brainer if you're in a cable area

★★★★★



### Sky+HD, £subscription

Sky's channel choice is second-to-none and its twin tuner 2TB PVR is a perfect partner. The recent EPG tweak is welcome and Anytime (the push VOD service) is brilliant for catching up on new movies

★★★★★



### Humax HDR-1100S, £190

Freesat Freetime PVR that impresses with its usability, VOD options and form factor – Humax's small, white box will slot into any kit rack. We tested the 500GB version – 1TB and 2TB models are also available

★★★★★



### Humax DTR-T4000, £subscription

This YouView-based PVR is required to get BT Sport's new Ultra HD channel – available to those with BT fast fibre and a BT TV sub. Easy to use and with 1TB of storage

★★★★★



### EE TV Smart Box £subscription

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though

★★★★★

## TOP 5 Headphones



### Sony MDR-HW700DS, £800

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening

★★★★★



### Oppo PM-1, £1,100

Audiophile-grade, using planar magnetic driver designs, and with a lush design and build. The sound quality of the PM-1s is superb, so while these are undoubtedly costly, buyers won't be disappointed

★★★★★



### Lindy Cromo NCX-100, £100

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound

★★★★★



### PSB M4U1, £220

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort

★★★★★



### Beyerdynamic T70, £330

Closed-back cans with excellent weight distribution for a comfy fit and a sound that doesn't put a foot wrong. These motor through movie soundtracks with vigour, clarity and a solid low-end

★★★★★

## TOP 5 Systems



### Panasonic SC-BTT505, £600

Two-way driver arrangements in these grown-up looking speakers (plus a dizzying range of features) make this a great purchase. Big, dynamic sound, with strong dialogue

★★★★★



### Samsung HT-J7750W, £800

Samsung's top-dog in its 2015 lineup is similarly styled and specc'd to last year's H series model. It has a powerful, dynamic sound, but is a little rough around the edges

★★★★★



### Harman/Kardon BDS470, £650

Harman's 2.1 system eschews 'net TV and streaming features but majors in heavyweight build quality and solid AV performance. We tested a 2.1 iteration – 5.1 is also available

★★★★★



### LG BH8220B, £650

With its silver finish, this is a suitable one-box system to partner with LG's flatscreen TVs, with a commendable, if slightly lacking in HF finesse, sound. Additional features including CD-ripping to USB. Handy

★★★★★



### Onkyo HT-S7705, £650

This Atmos-capable AV receiver and speaker package is an ideal entry-level setup for a forward-looking system. Loaded with features (including Wi-Fi and Bluetooth). Just add a BD deck and you're sorted

★★★★★

# HOME CINEMA

Choice

## → IN THE NEXT ISSUE

**Happy Birthday to Blu!** Celebrating 10 years of the hi-def disc format

**TV powerhouse** We travel to Shenzhen, China, where 8K TV is preparing for takeoff

**Dream Theatre** Retro Dolby Atmos picture palace

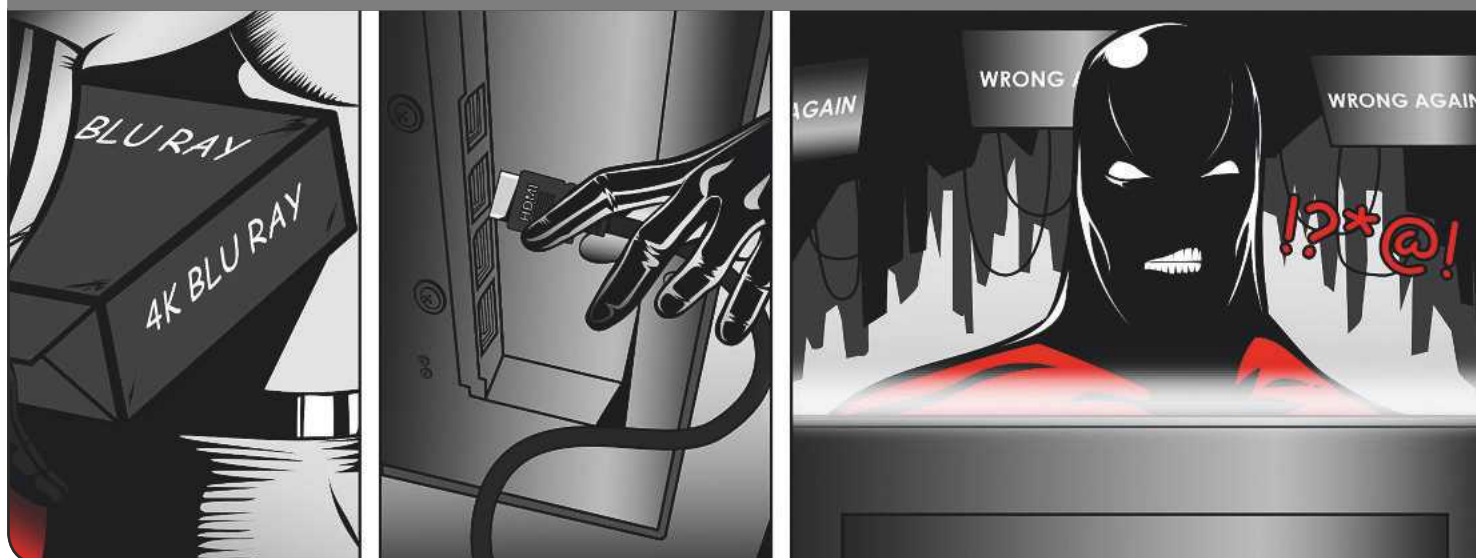
## HARDWARE

**Dynaudio Emit cinema speakers** Optoma GT5000 ultra-short-throw PJ **Sky Q Silver** Sony UHP-H1 Blu-ray player **Premium soundbase roundup** **PLUS** News, software, opinion, AV rooms and more!

CONTENTS SUBJECT TO CHANGE – BUT ONLY FOR THE BETTER

ISSUE  
#261 ON SALE  
June 9





# AV Avenger

Is Ultra HD Blu-ray the most ill-fated format launch since CED, wonders **Steve May**?  
The complexities of setup aren't exactly going to help it grab a space in UK living rooms

**4K BLU-RAY HAS** killed plug 'n' play home entertainment. For years now we've all got used to the idea that if you slot Product A into Widget B, it'll probably work. Ubiquitous plug 'n' play was the breakthrough that made technology usable by all, regardless of tech-savvy credentials. Many regard it as an inalienable right that things just work. This format unapologetically puts an end to all that.

I dare say **most would approach an upgrade believing that it's more of the same, only better**. But that would be far too easy. A conflagration of first-generation HDR TVs, new disc standard and early players have conspired to make UHD Blu-ray, in sheer usability terms, potentially the most ill-conceived format launch since RCA's stylus-based CED video disc system.

I first realised something was awry when an early Panasonic UB900 Blu-ray player sample declared it wasn't connected to an HDR display, even though all HDMI roads led to Panasonic's DX902 UHD Premium HDR TV. Naturally I assumed I was being a doofus, but then I went to an industry seminar on HDR, held by colourist Dado Valentic (see p10), who bemoaned exactly the same experience. Because the player and TV don't handshake, the user is required to manually assign the inputs on the DX902 to accept an HDR signal. Panasonic agreed this was probably a bit silly and promised to write a firmware fix, at least for its own kit combinations. But hook the UB900 up to a Sony XD93 HDR TV, and you'll probably encounter the same problem. On that set, HDMI inputs have to be 'enhanced' by the user in order to persuade the screen to display images in HDR with a wide colour space.

I then thrust my pointy finger at Samsung, whose own K8500 4K Blu-ray player has suffered similar connectivity issues. It pointed in turn at the fact that

the UHD BD spec was standardised with lowly HDMI v1.4 in mind. Samsung boffins admitted that on select Samsung HDR screens, users were required to manually select the correct colour space, because if they didn't they would see colour banding.

Now all this technical shuckwitters may actually add to the fun if you're an *HCC* reader, but in the wider world I fear the consumer experience is going to be chaotic, as more hardware combinations become available. Samsung suggests that usability issues will eventually go away but is 4K Blu-ray robust enough to weather early bad word of mouth? I have doubts. Mainstream consumers, quite rightly, have zero tolerance for obtuse complexity.

## Trouble brewing

And there are other less obvious issues to contend with. When your new HDR telly is duly configured to accept a 4K UHD Blu-ray input, it'll automatically calibrate when it receives HDR content, setting the right EOTF (that thing that's replaced gamma) and colour space. This is a good thing – that's what the static metadata in the HDR 10 standard does. But when that very same input gets a regular 1080p BD poured in, the telly has no idea what to do with it because it doesn't have metadata for guidance. Most likely the screen will decide to play the disc at full brightness and contrast, with catastrophic picture quality consequences. Samsung suggested to me consumers best get used to juggling picture settings depending on the disc being played. That's going to be a good one to explain to any partner who at best tolerates your tedious AV obsession. REC.709 or HDR DCI-P3 tonight darling? Netflix and chill probably sounds better... ■

*Got a 4K BD deck? Having issues with setup?  
Let us know: email [letters@homecinemachoice.com](mailto:letters@homecinemachoice.com)*

**Steve May** likes nothing better than poring through a TV manual to double-check HDMI settings. Okay, maybe not





# SERIE T/i



T/7i (left) shows proprietary Arrow™ zero compression wireless connector upper corner.  
T/9i (right) features new Fiberallloy™ ultra-fast driver.

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